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SURVEY OF INFLUENZAL MENINGITIS OVER A TEN YEAR PERIOD (1931-1941)

EVELYNNE G. KNOUF, M.D.
LOS ANGELES

WILLIAM J. MITCHELL, M.D.
ALHAMBRA, CALIF.
AND
PAUL M. HAMILTON, M.D.
SAN MARINO, CALIF.

A survey of cases of influenzal meningitis seen and treated in the contagious disease department of the Los Angeles County Hospital over a ten year period (July 1, 1931 to July 1, 1941) reveals some interesting data.

The series of cases reported represents a total of 63 patients. Of these 47 were under 6 years of age and 16 were over 6. There were 36 males and 27 females. The gross mortality for the series was 84 per cent.

The patients have been divided into four groups: group 1, who received only symptomatic treatment; group 2, who were treated with serum; group 3, who were given sulfanilamide, and group 4, who received sulfapyridine. Each group will be considered separately.

GROUP 1: PATIENTS TREATED SYMPTOMATICALLY

In group 1 there were 19 patients, of whom 15 were under the age of 6 years. The remaining 4 were adults (ages, 33 to 73). Eleven were males and 8 females. Five were in the hospital less than twenty-four hours, the longest hospital stay being six weeks and the shortest three hours. The average for the group was six and six-tenths days.

Symptomatic treatment consisted of parenteral administration of fluids, transfusions and use of sedatives and antipyretics.

All the patients in this group died.

GROUP 2: SERUM TREATED PATIENTS

There were 19 patients in this group also, of whom 12 were males and 7 females. There were 12 under 6 years of age and 7 adults (ages, 7 to 76). Five were in the hospital less than twenty-four hours, the shortest stay being two hours and the longest seventeen days. The average hospital stay was seven and four-tenths days.

Anti-influenzal serum [1] was administered to every patient in the group. It was given intramuscularly, intravenously and intraspinally. By the last mentioned route the average amount used varied from 15 to 25 cc. given once or twice daily. Intravenously, 100 to 200 cc. of serum in 200 to 300 cc. of isotonic solution of sodium chloride was given every eight hours.

All the patients in this group, as in the previous one, died.

GROUP 3: SULFANILAMIDE TREATED PATIENTS

In this group all 13 patients received sulfanilamide orally and subcutaneously, together with Fothergill's serum intravenously, intraspinally and intramuscularly.

Nine were less than 6 years of age, and 4 were over this age. There were 6 males and 7 females. The shortest hospital stay was two days and the longest sixty days, with an average of fifteen and one-half days.

Only one patient survived. The history of the patient who survived is reviewed:

H. R., a white girl aged 6 years, was admitted on Dec. 16, 1938 with a history of insomnia, restlessness, anorexia and fever for two days and stiff neck and convulsions for twenty-four hours.

Physical examination revealed that the child was poorly nourished and developed, delirious and acutely ill, with a temperature of 104 F., a pulse rate of 148 and a respiratory rate of 36. There was boardlike rigidity of the neck. Brudzinski's and Kernig's signs were present and Babinski's bilaterally.

The initial and subsequent laboratory data are summarized in table 1.

Treatment consisted in the administration of massive doses of sulfanilamide and anti-influenzal serum. In a ten day period from December 16 to 27 the patient received a total of 9,350 cc. of 1 per cent sulfanilamide solution, or 1,402½ grains. The concentrations in the blood ranged from 2 to 13 mg. per hundred cubic centimeters and that in the spinal fluid from 7 to 15 mg. The drug was discontinued because of the appearance of jaundice and severe anemia. Anti-influenzal serum, 100 cc., was given intravenously on admission and then every eight hours until a total of 791 cc. had been given. On December 20 intrathecal administration of the serum was started in doses of 15 cc. with 5 cc. of complement, and it was carried out daily up to and including December 31. On December 23, seven days after admission, the spinal fluid culture was negative, and it remained so.

The patient was discharged on Feb. 17, 1939 as cured and was seen in the outpatient department in January 1941. At this time there were no complaints. The child was attending school and was doing well.

GROUP 4: SULFAPYRIDINE TREATED PATIENTS

There were 12 children in this group. Of this number 7 were boys and 5 girls. The oldest was 8 years and the youngest 3 months, and both of them survived. The patients who lived numbered 9; 5 were 2 years or less, 1 was 3 years, 2 were 4 years and 1 was 8 years old. There were 3 deaths; the patients were 20 months, 2 years and 3 years of age, respectively. It becomes

From the contagious disease unit of the Los Angeles County Hospital and the University of Southern California School of Medicine.

1. Obtained from the laboratories of the Commonwealth of Massachusetts and commonly referred to as Fothergill's serum.

obvious that the mortality for this group is astonishingly low.

The shortest hospital stay was eight days and the longest eighty-one days, making an average of fifty-one days, or seven weeks, in round figures.

All the patients in this group except 1 received serum in addition to sulfapyridine.

The cases in this group are briefly summarized:

CASE 1.—L. P., a white girl aged 18 months, entered the hospital on April 7, 1939 with a history of fever, vomiting and stiff neck for twenty-four hours. The examination revealed that the child was irritable and acutely ill, with a temperature of 103 F., a pulse rate of 110 and a respiratory rate of 28. The neck and the spine were rigid. Kernig's and Brudzinski's signs were elicited.

The blood count showed 68 per cent hemoglobin, 3,500,000 red cells and 15,000 white cells, with 68 per cent lymphocytes. Spinal puncture revealed a pressure of 400 mm., a reaction for globulin of 2+ and 810 polymorphonuclear cells. Both spinal fluid and blood cultures were positive for Hemophilus influenzae.

The patient was given sulfapyridine orally, 1 Gm. every four hours, and the drug was discontinued on the fourteenth day. A total of 84 Gm. had been administered. In addition, 40 cc. of anti-influenzal serum was given intravenously every twelve hours. However, this treatment was discontinued on the fourth day because of a severe serum reaction. Blood and spinal fluid cultures were negative on the third day after admission, and the child steadily improved. She was discharged on the thirty-eighth day (May 5) with no residual complaints, and recent follow-up has revealed her to be in perfect health.

CASE 2.—C. H., A white girl aged 2 years, was admitted on June 19, 1939 with a history of anorexia, vomiting, a temperature of 103 F. and a stiff neck for two days. On entry the temperature was 102.6 F., the pulse rate 126 and the respiratory rate 36. The child was semicomatose. There was boardlike rigidity of the neck and the spine. Kernig's sign was elicited.

Examination of the spinal fluid showed a pressure of 300 mm. and cells numbering 76,000, all of which were polymorphonuclear. A blood count revealed 74 per cent hemoglobin and 14,550 white cells, with 86 per cent polymorphonuclear leukocytes. Cultures of spinal fluid taken daily for fourteen days were all positive for H. influenzae.

The patient was given 1 Gm. of sulfapyridine every four hours orally until July 16, when 127.5 Gm. of the drug had been administered. The concentration in the blood varied between 5 and 13 mg. per hundred cubic centimeters. The child was discharged on August 11 as well.

CASE 3.—J. S., a white girl aged 2½ years, entered the hospital on May 20, 1939 with a history of chills, fever, vomiting and stiff neck for three days. Examination revealed her to be acutely ill, with a temperature of 103.6 F., a pulse rate of 138 and respiratory rate of 26. There was marked rigidity of the neck and the back, and Kernig's and Brudzinski's signs could be elicited.

The blood count revealed 65 per cent hemoglobin, 3,900,000 red cells and 14,500 white cells, with 91 per cent polymorphonuclear leukocytes. Examination of the spinal fluid showed a pressure of 240 mm., with 1,180 polymorphonuclear cells present. H. influenzae was found on culture of the initial spinal fluid taken. The cultures remained positive until death.

The patient received both sulfanilamide (10 grains [0.6 Gm.] every four hours) and sulfapyridine. By the time she died, she had received 50 Gm. of sulfanilamide and 587 Gm. of sulfapyridine in addition to 190 cc. of anti-influenzal serum. The concentration in the blood varied from 4.5 to 16 mg. per hundred cubic centimeters. At times the patient seemed to improve. The temperature ranged from 98.6 to 104 F. and the spinal fluid cell count from 1,180 to 40. Several transfusions were performed. In spite of heroic treatment, the patient died on August 3. Autopsy revealed thick, purulent material at the base of the brain, considerable softening of the brain tissue and definite enlargement of the ventricles.

CASE 4.—R. J., a Negro boy aged 3 years, entered the hospital on July 6, 1939 with a history of vomiting, fever and stiff neck for four days. He was extremely restless and irritable and had a temperature of 99.4 F., a pulse rate of 110 and a respiratory rate of 24. The throat was badly injected, the neck and spine were stiff and Kernig's and Brudzinski's signs could be elicited.

A blood count revealed 60 per cent hemoglobin, 3,500,000 red cells and 16,000 white cells, with 88 per cent polymorphonuclear leukocytes. Examination of spinal fluid showed a

TABLE 1.—*Laboratory Data for H. R.*

	Blood						Spinal Fluid						Concentration of Drug, Mg. per 100 Cc.	
Date	Hemoglobin, per Cent	Red Blood Cells	White Blood Cells	Polymorphonuclear Leukocytes, per Cent	Culture	Icteric Index	Pressure	Chlorides, Mg. per 100 Cc.	Pandy Reaction	Cells	Polymorphonuclear Leukocytes, per Cent	Culture	Blood	Spinal Fluid
12/16/38	..	...	.....	..	H. influenzae	.....	400	730	+++	8,500	95	H. influenzae	..	..
12/17/38	75	4.0	15,100	85	H. influenzae	.....	400	690	+++	4,800	97	H. influenzae	..	..
12/18/38	..	...	.....	..	.....	.....	400	...	++++	9,600	99	Negative	..	..
12/19/38	..	...	.....	..	.....	.....	100	...	++++	10,100	99	Positive	8	8
12/20/38	..	...	.....	..	.....	10-15	300	...	+++	3,800	99	Positive	..	8
12/21/38	..	2.63	17,150	88	.....	.....	250	...	+++	3,600	99	Negative	13	11
12/22/38	..	...	.....	..	.....	.....	300	...	++++	7,500	99	Positive	..	20
12/24/38	..	...	.....	..	.....	.....	...	...	+++	2,820	99	Negative	..	16
12/27/38	..	1.2	26,800	62	.....	20	...	...	+++	4,500	99	Negative	..	11
12/28/38	..	2.2	37,250	68	.....	.....	...	...	+++	1,250	99	Negative	..	1.5
12/29/38	..	2.3	.....	..	.....	.....	150	...	++	200	99	Negative	0	0
12/30/38	..	1.6	7,800	78	.....	.....	...	...	.....	.....	..	.....	..	..
1/ 2/39	..	...	.....	..	.....	.....	200	...	++	28	Lymphocytes	Negative	..	..

TABLE 2.—*Summary of Data by Groups*

	Total Patients	Sex		Age			Hospital Stay				Complications Serum					Mortality, per Cent
		♂	♀	2 Yr. or Less	Total Under 6 Yr.	Total Over 6 Yr.	Less Than 24 Hr.	Shortest Hospital Stay	Longest Hospital Stay	Average Hospital Stay	Otitis Media	Mastoiditis	Septicemia	Bronchopneumonia	Sinusitis	
Group 1: symptomatic treatment	19	11	8	9	15	4	5	3 hr.	6 wk.	6.6 days	5	3	2	5	..	100
Group 2: serum.....	19	12	7	8	12	7	5	2 hr.	17 days	7.4 days	2	..	1	4	1	100
Group 3: sulfanilamide.....	13	6	7	8	9	4	0	2 days	60 days	15.5 days	4	2	..	2	..	92.3
Group 4: sulfapyridine.....	12	7	5	7	11	1	0	8 days	81 days	51 days	2	..	6	..	..	25

pressure of 250, with 2,200 polymorphonuclear cells. Both spinal fluid cultures and blood cultures were positive for H. influenzae.

The administration of sulfapyridine was started with 2 Gm., and then 1 Gm. was given every four hours, with a total dose of 40 Gm. in an eight day period. The spinal fluid culture became negative on July 12, and improvement was steady. The patient was discharged on August 11.

CASE 5.—J. McG., a white boy aged 4 years, entered the hospital on Feb. 25, 1940 with a history of fever, vomiting and stiff neck for one day. Examination revealed that he was acutely ill and prostrated by continuous vomiting. The temperature was 103.2 F., the pulse rate 132 and the respiratory rate 36. The neck was stiff and Brudzinski's and Kernig's signs were elicited.

The blood count revealed 80 per cent hemoglobin, 5,190,000 red cells and 34,800 white cells, with 86 per cent polymorphonuclear leukocytes. Examination of the spinal fluid showed a pressure of 135 mm., a reaction for globulin of 4 plus and 2,000 polymorphonuclear cells. H. influenzae was found on smear and on culture of the spinal fluid as well as of the blood.

The patient was given 1 Gm. of sulfapyridine every four hours and 20 cc. of 5 per cent sodium sulfapyridine solution intravenously on two occasions eight hours apart. He showed much improvement in three days and on March 2 was afebrile. Administration of the drug was continued until March 10, or for ten days after the spinal fluid cultures became negative. The total amount given was 113.5 Gm. In addition the patient received 210 cc. of anti-influenzal serum intravenously. He was discharged on March 25.

CASE 6.—R. B., a white boy aged 20 months, was admitted on Nov. 1, 1939 with a history of fever, lethargy for twelve days and coma for twenty-four hours. He was extremely toxic and comatose, rousing only to painful stimuli. The throat was severely injected and the left tympanic membrane red and bulging. The neck was rigid. There was paralysis of the right arm and leg.

A blood count revealed 88 per cent hemoglobin, 4,300,000 red cells and 16,000 white cells, with 61 per cent polymorphonuclear leukocytes. Examination of the spinal fluid showed a pressure of 350 mm., 74 cells (all lymphocytes) and a 3+ reaction for globulin. Spinal fluid cultures were positive for H. influenzae and continued so until death.

Sulfapyridine was given orally, the total dose being 25 Gm.; 60 cc. of anti-influenzal serum was given intravenously. The patient showed no improvement. The spinal fluid cell count varied between 64 and 240, the presence of lymphocytes pointing to chronic meningitis. There was also evidence of hydrocephalus. The patient died on November 4.

CASE 7.—E. M., a Mexican boy aged 3 years, entered the hospital on March 14, 1941 with a history of cough, fever, lethargy and vomiting for eight weeks and headache for two weeks. Examination revealed that he was well nourished and well developed, acutely ill and extremely irritable, with a temperature of 103.6 F., a pulse rate of 124 and a respiratory rate of 38. There was moderate rigidity of the neck, and Kernig's and Brudzinski's signs could be elicited.

A blood count revealed 68 per cent hemoglobin, 3,700,000 red cells and 13,050 white cells, with 76 per cent polymorphonuclear leukocytes. Examination of the spinal fluid showed a pressure of 130 mm. and 1,782 cells, with 68 per cent polymorphonuclear leukocytes. The spinal fluid was positive for H. influenzae on smear and culture. A blood culture was negative.

The patient was treated intensively, first with sulfanilamide (the total received in twelve hours was 45 grains [3 Gm.]) and then with sulfapyridine (268 Gm. in a thirty-eight day period). The concentration in the blood varied from 8 to 14.4 mg. per hundred cubic centimeters. In addition, 200 cc. of anti-influenzal serum was given intravenously. Death occurred on April 4.

CASE 8.—C. W., a white girl aged 8 years, entered the hospital on Aug. 31, 1940 with a history of vomiting and headache for one day and coma for eight hours. Examination revealed that she was comatose and acutely ill, with a temperature of 104 F., a pulse rate of 144 and a respiratory rate of 36. There was boardlike rigidity of the neck, and Kernig's and Brudzinski's signs were elicited.

A blood count revealed 90 per cent hemoglobin, 4,550,000 red cells and 13,750 white cells, with 66 per cent polymorphonuclear leukocytes. The spinal fluid pressure was 350 mm., the reaction for globulin was 3+ and there were 9,856 cells, with 96 per cent polymorphonuclear leukocytes. Blood and spinal fluid cultures were positive for H. influenzae.

The patient was given a 1 per cent solution of sulfanilamide, 200 cc. subcutaneously every eight hours; after a report on the culture was received and 800 cc. had been given, the treatment was changed to continuous drip administration of 0.5 per cent sodium sulfapyridine solution, a total of 3,500 cc., or 35 Gm., being given. The drug was then given orally, 1 Gm. every four hours, until a total of 163 Gm. had been administered. In addition, 180 cc. of anti-influenzal serum was given intravenously. The patient had a relapse during therapy, and so on October 21 administration of sulfathiazole, 1 Gm. every four hours, was begun. This treatment was continued until October 18, when a total of 91 Gm. had been given. The last spinal fluid culture, material for which was obtained on September 29, was negative. The patient was discharged on October 23.

CASE 9.—G. S., a Mexican boy aged 1½ years, entered the hospital on Sept. 9, 1940 with a history of cough and vomiting for one week and fever and stiff neck for three days. Examination revealed that he was acutely ill, restless and irritable, with a temperature of 102.6 F., a pulse rate of 144 and a respiratory rate of 44. There was evidence of pneumonitis of the lower lobe of the left lung, the neck was rigid and Brudzinski's and Kernig's signs could be elicited.

A blood count revealed 92 per cent hemoglobin, 5,300,000 red cells and 39,600 white cells, with 67 per cent polymorphonuclear leukocytes. Examination of the spinal fluid showed a pressure of 240 mm., with 208 lymphocytes. Blood and spinal fluid cultures were positive for H. influenzae.

The child was treated with emulsion of sulfapyridine, 5 grains (0.3 Gm.) every four hours given orally and a 0.5 per cent solution given intravenously. A total of 40 Gm. was given over a ten day period. Also 125 cc. of anti-influenzal serum was given intravenously. The concentration in the blood varied between 6 and 17.5 mg. per hundred cubic centimeters. The cultures remained positive until October 20; medication was continued for five days afterward. The patient was discharged on November 27.

CASE 10.—R. M., a Mexican boy aged 3 months, entered the hospital on Oct. 21, 1940 with a history of irritability and fever for one week. Examination revealed that he was acutely ill, holding his head in the opisthotonic position. The fontanel was bulging, the neck and the spine were stiff and Kernig's and Brudzinski's signs could be elicited.

A blood count revealed 55 per cent hemoglobin, 3,420,000 red cells and 16,150 white cells, with 74 per cent polymorphonuclear leukocytes. On examination of the spinal fluid it showed a pressure of 225 mm., with 2,160 polymorphonuclear leukocytes. A smear and a culture of the spinal fluid were positive for H. influenzae, as was a culture of the blood.

Intravenous administration of 1 per cent sulfapyridine solution was started immediately, 25 cc. being given every four hours day and night for three days, and then emulsion of sulfapyridine was given. Administration of the drug was continued until November 11, when a total of 56 Gm. had been given. In addition, 150 cc. of anti-influenzal serum was given intravenously. The concentration in the blood varied from 2 to 8.5 mg. per hundred cubic centimeters. The patient was discharged on November 29.

CASE 11.—R. U., a Mexican girl aged 2 years, entered the hospital on Feb. 1, 1941 with a history of chills, fever and vomiting for five days. Examination revealed her to be extremely irritable and acutely ill, with a temperature of 103 F., a pulse rate of 116 and a respiratory rate of 24. Both tympanic membranes were bulging, and there were pneumonitis of the left lung and boardlike rigidity of the neck and back.

A blood count revealed 90 per cent hemoglobin, 4,950,000 red cells and 18,800 white cells. The spinal fluid pressure was 400 mm., and there were 1,400 cells, of which 80 per cent were

polymorphonuclear leukocytes. A spinal fluid culture was positive for H. influenzae.

Intravenous drip administration of 0.5 per cent sodium sulfapyridine solution was started, and in three days the patient had received 5,000 cc., or 50 Gm., of the solution. She was then given sulfapyridine orally until she had received 151.5 Gm. more. The concentration in the spinal fluid varied from 8.5 to 50 mg. per hundred cubic centimeters. Spinal fluid cultures remained positive until March 10, after which use of the drug was continued for five days. The patient was discharged as well on April 22.

CASE 12.—M. G., a white boy aged 4 years, was admitted to the hospital on April 21, 1941 with a history of fever, vomiting and stupor for three days. Examination revealed him to be comatose, acutely ill and moderately dehydrated, with a temperature of 104 F., a pulse rate of 150 and a respiratory rate of 44. There was pneumonitis of the base of the right lung, the neck was rigid and Kernig's sign was present and Brudzinski's absent. Examination of the spinal fluid showed a pressure of 400 mm. and the presence of polymorphonuclear leukocytes. A spinal fluid culture was positive for H. influenzae.

The patient was given sodium sulfapyridine intravenously, 50 cc. of 5 per cent solution, followed by continuous drip administration of a 0.5 per cent solution. This was continued for four days. The drug was then given by mouth until May 7, 1941. The concentration in the blood varied from 2 to 6 mg. per hundred cubic centimeters. The spinal fluid culture became negative on April 27 and remained so thereafter. The patient was discharged on May 19.

COMMENT

A 100 per cent mortality for any disease is always most discouraging. However, with the dawn of the era of chemotherapy a ray of hope shines forth on the gloomy therapeutic horizon. With the advent of sulfanilamide the results obtained with influenzal meningitis were nothing to comment about. With the introduction of sulfapyridine, and with a certain amount of knowledge gained in the field of chemotherapy through experience with sulfanilamide, good results were obtained. When it is noted that the oldest patient in the last group of 12 was 8 years of age, or that 7 of the 12 patients in this group and 5 of the 9 survivors were 2 years or less, the contribution becomes much more significant. Thus, the fourth group rightfully commands interest and attention.

We have now more or less established a routine in the Los Angeles County Hospital with regard to treatment of influenzal meningitis. Immediately after diagnosis (this is usually a matter of a few hours only), continuous drip administration of sodium sulfapyridine (0.5 or 1 per cent solution in isotonic solution of sodium chloride) is begun, regardless of whether the patient is willing or able to take the drug orally. The purpose is to obtain as high a concentration as possible in the blood and the spinal fluid within twenty-four to forty-eight hours. We feel that the time element is important. We strive for a concentration of at least 10 to 12 mg. per hundred cubic centimeters and do not complain if it reaches the high level of 20, 30 or 40 mg. It may be seen that in 1 instance the concentration in the blood and in the spinal fluid reached 50 mg. with no ill effects. It is usually not necessary to maintain the drip of sulfapyridine for longer than seventy-two hours. The dose of the drug is calculated in the early stages on the basis of 2 to 3 grains (0.13 to 0.2 Gm.) per pound (450 Gm.) of body weight in twenty-four hours, with from one half to two thirds of the first twenty-four hour dose being given in the short space of three to four hours. The concentration in the blood and in the spinal fluid are determined daily. The dose is regulated accordingly. Administration of the drug is continued for two weeks after the spinal fluid becomes sterile and the temperature drops to normal, because of the tendency to relapse. Toward the end of this period the dose is gradually tapered off. During the period of therapy special attention is paid to the maintenance of good general nutrition. Dextrose intravenously, blood by transfusion and vitamins are given as needed. A blood count and a urinalysis are performed at least every two days and oftener if indicated. We endeavor to maintain an alkaline p_H of the urine. Occasionally use of the drug must be discontinued because of some unfavorable reaction. It is interesting to note that in group 4 (12 patients) it did not become necessary to do this in spite of the heroic measures taken. Because our experience has given us a thoroughly wholesome respect for the sulfonamide drugs, we are ever on the alert for any untoward reaction.

It should be mentioned again that 11 of the 12 patients in group 4 received Fothergill's anti-influenzal serum; however, in view of the fact that 32 patients previously had received the serum, with a mortality of 100 per cent, we feel no credit is due it with regard to the 25 per cent mortality in group 4. We should mention too that none of the patients of group 4 received any therapy intraspinally.

It is of interest that the average hospital stay per patient for groups 1 and 2 was six and six-tenths and seven and four-tenths days, respectively. However, with the advent of chemotherapy and the use of sulfanilamide, in spite of the high mortality the life of the patients had been prolonged by at least a week, the average being fifteen and one-half days. With the use of sulfapyridine the average hospital stay per patient increased to fifty-one days. It is our experience that a patient who survives remains in the hospital at least thirty days and usually two to three months.

With regard to spinal punctures, we do not hesitate in the least to do them daily. As a rule a patient with meningitis has a spinal puncture every one to two days until the temperature drops to normal and the spinal fluid shows signs of clearing. During the two week period when the patient is afebrile and is still receiving the drug a puncture is done every three or four days. The procedure during this period, we feel, is invaluable, as it is not always possible to evaluate the patient's progress accurately by the clinical appearance alone. On many occasions we have done a spinal puncture on a patient who was afebrile and uncomplaining and had no meningeal signs only to find a change in the fluid. Thus we were able to predict a relapse and start treatment again as much as three to four days before the patient became febrile or showed any clinical manifestations of such an occurrence. The spinal fluid in such a case will show a growth on culture, an increase in globulin and an increase in the number of cells or a change in the type of cells from lymphocytes to polymorphonuclear leukocytes. Our patients remain in the hospital fourteen days after chemotherapy has been discontinued. Three or four spinal punctures are done during this period. Hence, every patient who survives will have had a minimum of ten and an average of fifteen to twenty. The record for number is held by a 2 year old girl who was in the hospital seventy-five days and had sixty-nine taps. From our experience with all types of meningitis through the years, we are certain that we have never done a single patient any harm by a carefully performed spinal tap.

What the future holds for influenzal meningitis with new sulfonamide drugs coming to the fore no one can predict. We can only hope that a future follow-up study will present results as gratifying as those reported here.

SUMMARY

Sixty-three patients with influenzal meningitis were seen and treated over a ten year period (July 1, 1931 to July 1, 1941) in the contagious disease department of the Los Angeles County Hospital.

The gross mortality for the entire series was 84 per cent. However, when the series is broken down into groups one is better able to evaluate the true state of affairs. Group 1 consisted of 19 patients treated only symptomatically. In this group all patients died. Group 2 also had 19 patients. These were treated with serum alone. All received anti-influenzal serum. All died in this group too. Group 3, the sulfanilamide treated patients, numbered 13; there was 1 survivor. In the last, or fourth group, there were 12 patients, with 9 survivors, or a mortality of about one fourth. The patients in this group were treated with sulfapyridine.

TREATMENT OF MENINGOCOCCIC MENINGITIS WITH SULFONAMIDES

HORACE L. HODES, M.D.
AND
PAUL S. STRONG, M.D.
Captain, U. S. Army
BALTIMORE

Early in 1937 Schwentker, Gelman and Long [1] described the use of sulfanilamide in the treatment of 10 patients with meningococcic meningitis at Sydenham Hospital. Nine of the 10 patients treated recovered. Many other reports confirming the value of this drug in meningococcic meningitis have appeared.[2] It soon became apparent that sulfanilamide was at least as effective in meningitis as antimeningococcus serum. In fact, all the evidence points to the conclusion that the drug is more reliable than serum. For example, in Waghelstein's [3] series reported from Sydenham Hospital in 1938 the mortality rate in a series of 368 serum treated patients was 27 per cent, while among 72 patients receiving sulfanilamide the fatality rate was 15 per cent. As each new sulfonamide drug became available it was employed in meningococcic infections. During the past two years it has become evident that sulfapyridine,[4] sulfathiazole [5] and sulfadiazine [6] are all effective in meningococcic meningitis. In fact it appears probable that they may be more effective than sulfanilamide, and one or other of them may replace it in the treatment of meningitis.

The present paper deals with 110 patients with meningococcic meningitis who were admitted to Sydenham Hospital between Jan. 1, 1938 and Jan. 31, 1942. During this four year period Baltimore and the vicinity did not experience a large outbreak of meningococcic meningitis, so that it must be considered that these were endemic cases. However, it should be noted that, as judged by the number of patients admitted to the hospital, there was between February 1941 and January 1942 an incidence of the disease which is distinctly greater than usual for Baltimore (chart 1).

DIAGNOSIS

Nearly all the cases included in this paper presented obvious clinical symptoms of meningitis on admission. Fever, petechial rash, headache, stiffness of the neck, bulging fontanel, delirium and extreme irritability were the most frequent symptoms. Lumbar puncture in all 110 cases revealed turbid cerebrospinal fluid. The diagnosis of meningococcic meningitis was confirmed by smear and culture in all but 5 cases. Four of the 5 patients had received sulfonamide drugs before admission to the hospital.

An attempt was made to type the meningococci isolated from 20 of the patients in the series. Three of these cultures could not be typed, 4 were of group II while the remaining 13 were of group I. This finding may be of some significance, since the organisms of group I are more likely to cause epidemics. They are generally said to be more virulent than those of group II [7] although group II organisms were isolated from 2 of our patients who were extremely ill.

TREATMENT

During 1938 and 1939, all the patients in the series were treated with sulfanilamide. During 1940 sulfapyridine was used in a few cases and in 1941 sulfathiazole and sulfadiazine were used with increasing frequency. In fact, all of the last 46 patients were treated with sulfathiazole or sulfadiazine. In all, 57 of the 110 patients were treated with sulfanilamide, 36 with sulfathiazole, 10 with sulfadiazine and 7 with sulfapyridine. None of the 110 patients received antimeningococcus serum.

In the treatment of so dangerous an infection as meningococcic meningitis it is essential to administer as quickly as possible an amount of the sulfonamide which will provide the blood and body fluids with a concentration of drug sufficient to halt the spread of infection. At the same time overdosage must be avoided, since extremely high concentrations of the sulfonamides may be attended by toxic effects which may be disastrous in patients who are suffering from severe meningococcic toxemia. The dosage of the sulfonamide derivative must be varied with age and weight and with the severity of the infection, so that each patient must be considered as an individual problem. Nevertheless, we shall describe the plan to which, in a general way, our course of treatment now conforms:

Adults who are only mildly or moderately ill are usually given an admission dose of 4 to 6 Gm. of the

From Sydenham Hospital, Baltimore City Health Department.

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2. Carey, B. W., Jr.: The Use of Para-Aminobenzenesulfonamide and Its Derivatives in the Treatment of Infections Due to β-Streptococcus Hemolyticus, the Meningococcus and the Gonococcus: Report of Thirty-Eight Cases, J. Pediat. **11:** 202 (Aug.) 1937. McIntosh, Rustin; Wilcox, D. A., and Wright, F. H.: Results of Sulfanilamide Treatment at Babies Hospital, New York City; Survey of Fifty-Eight Cases Observed Prior to June 10, 1937, ibid. **11:** 167 (Aug.) 1937. Willien, L. J.: Sulfanilamide Therapy in Meningococcic Meningits, J. A. M. A. **110:** 630 (Feb. 26) 1938.

3. Waghelstein, J. M.: Sulfanilamide in Treatment of One Hundred and Six Patients with Meningococcic Infections, J. A. M. A. **111:** 2172 (Dec. 10) 1938.

4. Somers, R. B. U.: M. & B. 693 in Cerebrospinal Fever: A Review of One Hundred and Forty-Three Cases Treated Under Field Conditions, Lancet **1:** 921 (April 22) 1939.

5. Banks, H. S.: Sulfathiazole in Cerebrospinal Fever, Lancet **1:** 104 (Jan. 25) 1941.

6. Dingle, J. H.; Thomas, Lewis, and Morton, A. R.: Treatment of Meningococcic Meningitis and Meningococcemia with Sulfadiazine, J. A. M. A. **116:** 2666 (June 14) 1941.

7. Branham, S. E.: The Meningococcus (Neisseria Intracellularis), Bact. Rev. **4:** 59 (June) 1940.

sulfonamide by mouth, while infants and children in this category receive an initial oral dose of 0.1 Gm. per kilogram of body weight. One sixth to one fourth of the admission dose is then administered every four hours. If no untoward symptoms appear, this regimen is continued for ten days. Half of this dose is given for the next two days and on the thirteenth day after beginning of treatment the drug is discontinued.

Patients who appear critically ill, as evidenced by high fever, delirium, prostration or stupor, are given an initial oral dose of the sulfonamide derivative which is 30 per cent more than that employed in the cases of mild involvement, and the running dose of drug is correspondingly higher. If the patient is unconscious or delirious, the sulfonamide is given by stomach tube, and this method of administration is continued until it becomes certain that he is able to swallow. In addition to the oral dose of the sulfonamide, severely ill patients are usually given the drug parenterally. Sodium sulfapyridine, sodium sulfadiazine and sodium sulfathiazole are administered intravenously in 5 per cent solution in distilled water or isotonic solution of sodium chloride. The initial dose of these sodium salts is 0.03 Gm. per kilogram of body weight, and this amount may be repeated every six, eight or twelve hours as necessary. Sulfanilamide may be given subcutaneously in 0.8 per cent solution in isotonic solution of sodium chloride in doses of 0.05 Gm. per kilogram.

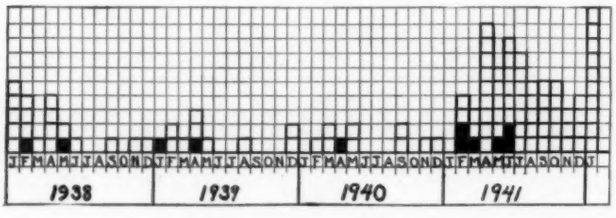

Chart 1.—Cases of meningococcic meningitis admitted to Sydenham Hospital between 1938 and 1942. Each column represents one month. Each black square indicates a fatal case; each white one a case in which the patient survived.

The concentration of free sulfonamide derivatives in the blood and spinal fluid varied considerably from patient to patient despite efforts to standardize the dosage employed. In general the concentrations were higher among the more severely ill patients who were given larger quantities of the sulfonamide derivative. All but 6 of the 75 patients tested had an average blood concentration of free sulfonamide derivatives above 5 mg. per hundred cubic centimeters, while 36 averaged between 5 and 10 mg., 30 between 10 and 15 mg., and 3 were over 15 mg. per hundred cubic centimeters. On the whole, the concentration was lower with sulfathiazole than it was when the other drugs were employed.

The concentration of free sulfanilamide, sulfapyridine and sulfadiazine in the spinal fluid was usually between two thirds and four fifths of that in the blood. With sulfathiazole the ratio of free drug in the spinal fluid to that in the blood was definitely lower. Blood and spinal fluid of 10 patients were examined simultaneously for sulfathiazole content (procaine hydrochloride was not used in doing the lumbar punctures). In each instance a measurable amount of the drug was found in the spinal fluid. The concentration in the spinal fluid ranged from one-fourth to a little more than half that found in the blood. An analysis of our data indicates that a blood concentration of free sulfanilamide between 10 and 15 mg. per hundred cubic centimeters is sufficient, while with sulfadiazine 8 to 12 mg. per hundred cubic centimeters has always proved effective. When sulfathiazole is employed even lower concentrations of the drug appeared to be effective, and a blood level of 6 to 10 mg. per hundred cubic centimeters of this drug is apparently sufficient. Obviously, more severely ill patients require more of the sulfonamide derivative than do those who are only moderately ill, and it is impossible to set arbitrary limits for the blood concentrations required. The amount of drug administered must be adjusted to the needs of each patient and the dose varied in accordance with the clinical course of the disease. Nevertheless it should be recalled that overdosage with the sulfonamides may cause symptoms which may lead to the erroneous conclusion that the meningococcic infection is not being controlled. The finding of a blood concentration much higher than those described should bring this possibility to mind.

TABLE 1.—*Age Distribution and Mortality Rate Among One Hundred and Ten Meningococcus Meningitis Patients Treated with Sulfonamides*

Age	Cases	Died	Mortality, per Cent
Under 1 year	10	1	10.0
1 to 5 years	24	1	4.2
6 to 10 years	16	0	0.0
11 to 15 years	9	0	0.0
Total under 15 years	59	2	3.5
Total over 15 years	51	10	19.6
Total all cases	110	12	10.9

In every case great attention is paid to general supportive measures. Everything possible is done to make the patient comfortable and to avoid such complications as bed sores, stomatitis and infection of herpetic lesions. With the exception of morphine and its derivatives, sedatives are used freely. Paraldehyde administered intravenously, intramuscularly or by rectum has proved to be the most generally useful drug for the control of the great restlessness, delirium and excruciating headache which make the nursing of patients with severe meningitis so difficult. Fluids are given freely by mouth as well as by venoclysis and hypodermoclysis. Constant vomiting and inability to swallow combine with high fever to cause severe dehydration and acidosis in many meningitis patients. This is especially true in the case of infants and children, and it is essential to restore the fluid and alkali balance as soon as possible. This is done by the administration of 5 per cent dextrose and saline solution and, when necessary, sixth-molar sodium lactate solution. In older patients it is not uncommon to encounter greatly diminished kidney function, and a large fluid intake is required for this reason also. We do not believe that the fluid intake should be curtailed

TABLE 2.—*Effectiveness of Various Sulfonamides*

Drug Employed	Cases	Deaths	Case Fatality Rate, per Cent
Sulfanilamide	57	10	17.5
Sulfapyridine	7	0	0.0
Sulfathiazole	36	2	5.5 } 3.3
Sulfadiazine	10	0	0.0
Total	110	12	10.9

in order to obtain a high concentration of the sulfonamide derivative in the blood and cerebrospinal fluid. Enough fluid should be given to maintain normal hydration, acid base equilibrium and kidney function. The patient should also receive whatever dose of the sulfonamide is necessary to insure an adequate concentration of the drug. Occasionally, blood transfusion is indicated and appears to be of great value. This is especially true in small infants whose hemoglobin often drops rapidly at the onset of severe meningococcic infection.

We believe that frequent lumbar punctures should be avoided and forced spinal drainage is never employed. As a general rule, specimens of spinal fluid are obtained only on admission and on the twelfth hospital day. Occasionally an additional lumbar puncture is done to reduce dangerously increased intracranial pressure or to determine progress in a doubtful case. Sometimes additional samples of spinal fluid are taken in order to compare the concentration of the sulfonamide in the cerebrospinal fluid with that in the blood.

As long as a sulfonamide derivative is being administered, hemoglobin estimations and white blood cell counts are done every other day and the urine is examined frequently in order to detect any toxic action of the drug as soon as possible. Minor symptoms due to these drugs are of rather frequent occurrence. Vertigo, anorexia and general malaise are especially common with sulfanilamide and sulfapyridine. These symptoms often cause patients considerable discomfort, but they usually need not be regarded as sufficient reason for discontinuing treatment. On the other hand, the occurrence of drug fever or rash, severe leukopenia, rapidly developing hemolytic anemia and gross hematuria should be considered as indications for immediate withdrawal of the drug or, if further treatment is necessary, for changing from one sulfonamide derivative to another. Among our patients the commonest of these more dangerous symptoms was drug fever, which usually began toward the end of the first week of treatment but which, on occasion, was noted as early as forty-eight hours after the beginning of sulfonamide therapy. In our experience it was most common with sulfanilamide and sulfathiazole and sometimes confused the clinical picture considerably. Sulfonamide fever was always suspected when, after two or three days of improvement, the patient became subjectively worse and the temperature rose. Examination of the spinal fluid was of great assistance at this point. If it was found that the cell count had greatly decreased and that the spinal fluid sugar had increased, it was considered safe to withdraw the drug. When an increase in the spinal fluid sugar was noted under these circumstances, cultures of the spinal fluid almost always proved to be negative.

Drug rashes of various types were noted. They were most common in cases in which sulfanilamide or sulfathiazole was given. Four of the 36 patients receiving sulfathiazole developed scleritis and typical erythema nodosum which promptly disappeared when the drug was discontinued. Transient neutropenia with a total white blood cell count below 2,500 was noted twice with sulfathiazole and once among the 7 patients treated with sulfapyridine. Gross hematuria lasting two days was encountered once among the 36 patients treated with sulfathiazole and twice among 10 treated with sulfadiazine, but all 3 of these patients recovered without any evidence of permanent impairment of kidney function.

Acute hemolytic anemia was noted in 3 patients treated with sulfanilamide. One of these patients died as a result of very rapidly developing anemia which began on the second day of treatment. Aside from this, drug complications were not encountered which did not promptly disappear when the sulfonamide derivative was discontinued. The more serious ill effects of the drug did not usually make their appearance before the end of the first week of treatment. By this time it was usually obvious that the patient was well on the road to recovery. Withdrawal of the drug at this point was never followed by a relapse or by a recurrence of the infection.

RESULTS

Twelve of the 110 patients (11 per cent) in the series died. One of these deaths was due to acute hemolytic anemia apparently caused by sulfanilamide. One patient died six hours and 1 twelve hours after admis-

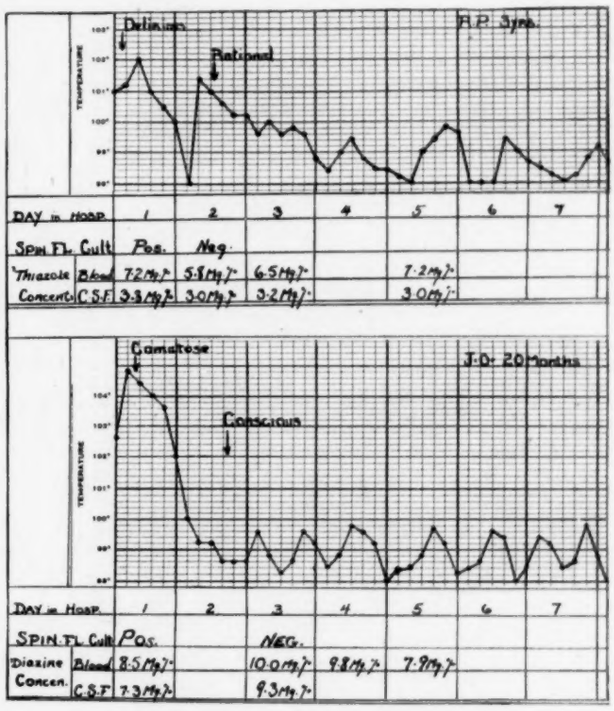
Delirium
Rational
R.P. 3yrs.
TEMPERATURE
DAY in HOSP. 1 2 3 4 5 6 7
SPIN. FL. Cult. Pos. Neg.
Thiazole Concen. Blood 7.2 mg% 5.8 mg% 6.5 mg% 7.2 mg%
C.S.F. 3.3 mg% 3.0 mg% 3.2 mg% 3.0 mg%
Comatose
Conscious
J.D. 20 months
TEMPERATURE
DAY in HOSP. 1 2 3 4 5 6 7
SPIN. FL. Cult. Pos. Neg.
Diazine Concen. Blood 8.5 mg% 10.0 mg% 9.8 mg% 7.9 mg%
C.S.F. 7.3 mg% 9.3 mg%

Chart 2.—Upper curve represents clinical course of patient treated with sulfathiazole. A child aged 3 years was extremely ill on admission; there was rapid improvement and recovery. Lower curve shows prompt recovery of an extremely ill infant aged 20 months treated with sulfadiazine.

sion to the hospital. One man aged 65 who had had precordial pain and dyspnea for a number of years apparently died of coronary disease during convalescence from meningitis. In 4 of the fatal cases there was a history of chronic alcoholism, and 1 of the patients of this group had apparently been on a drinking bout for many days before he contracted meningitis. Our experience with other alcoholic patients with meningococcic meningitis indicates that such patients on the whole do not respond as readily to treatment as do nonalcoholic patients. Whether this is due directly to the effect of alcohol or to the fact that these patients are usually in poor general health and inadequately fed is not clear. It appears to be a fact, however, that the chronic alcoholic addict with meningococcic infection is in greater than average danger of succumbing.

As can be seen from table 1, only 2 children of the 59 under 15 years of age died. One of these deaths

occurred among the 10 infants in the series who were under 1 year of age. This baby entered the hospital, after eight days of the disease, with well developed symptoms of subarachnoid block. A mortality rate of two deaths among 59 patients in the group under 15 years of age is exceedingly low and is especially interesting in connection with the fact that there were ten deaths among 51 adults. The groups of cases in question are too small, however, to warrant the conclusion that sulfonamide therapy is more effective among children than adults. In fact, statistical analysis reveals the fact that the observed difference in mortality rates may be fortuitous. This seems especially likely when one considers that the death rate among the adults, as we have shown, may have been affected by such factors as alcoholism which would not influence the outcome among children. It is nevertheless true that our results with sulfonamide therapy among children have been at least as good as among adults. This is in contrast with our experience with antimeningococcus serum. With this form of treatment, employed in Sydenham Hospital before 1937, the results among children were much less satisfactory than they were in the treatment of adults.

It is apparent that the total of twelve deaths among the 110 patients treated is quite low. Since none of the patients received specific serum, the results obtained clearly indicate the effectiveness of sulfonamide therapy. However, as we have already pointed out, the patients were not treated during an epidemic period, and it is reasonable to assume that the mortality rate during an epidemic would be appreciably higher. Furthermore, we are unable to offer an opinion regarding the advisability of using specific serum in addition to sulfonamide therapy. It is possible that such a combination would have reduced our mortality rate. We have the feeling, however, that if serum is to be employed it should not be administered intrathecally but only intravenously. In our opinion the ill effects of the intraspinal administration of serum would outweigh the advantages it would add to sulfonamide treatment.

Although we have stated that the patients described in the present communication were not treated during an epidemic, it should not be assumed that they were all only mildly ill. On the contrary, many of those who recovered appeared to be critically ill on admission, and a number of them seemed to be moribund. In fact, 58 of the patients were prostrated, comatose, delirious or completely disoriented on entry to the hospital. One of the striking effects of sulfonamide therapy was the rapidity with which these ominous symptoms disappeared. Many patients whose symptoms began suddenly and who apparently were the victims of a fulminating infection improved rapidly after the institution of sulfonamide therapy. Usually improvement was noted within twenty-four or thirty-six hours and nearly always it was apparent after seventy-two hours that the patient would recover.

It is difficult to compare one sulfonamide with another as regards its effectiveness in meningitis. The severity of the disease varies so greatly from patient to patient and from time to time in a community that only the study of a large series of patients treated with each drug during an epidemic can yield conclusive results. Obviously, the patients described in the present paper do not comprise such a group, but our experience to date makes us lean toward the opinion that sulfathiazole, and probably sulfadiazine, is superior to sulfanilamide. This belief is based not only on the lower mortality rate with these drugs, as shown in table 2, but also on the fact that the response to treatment is more rapid when sulfathiazole or sulfadiazine is used. Patients treated with these drugs have recovered from their stupor and delirium more rapidly than those treated with sulfanilamide, and in general their temperature curve has returned to normal more quickly. Incidentally, it should be noted that every one of our last 43 patients, all of whom were treated with sulfathiazole or sulfadiazine, has recovered. Chart 2 illustrates the type of clinical response obtained with these drugs.

That sulfathiazole is found in normal spinal fluid in relatively low concentrations has been known for some time.[8] Our results and those reported by others,[5] however, indicate that this drug is of great value in meningococcic meningitis. The effectiveness of sulfathiazole, despite its inability to enter the spinal fluid in high concentration, may mean that it is relatively more active against the meningococcus than are the other drugs. Or it may be that the drug diffuses into the meninges, which are the actual site of the infection, in high concentration.

The usual complications and sequelae of meningococcic meningitis were encountered among our patients. The most distressing of these, permanent bilateral eighth nerve deafness, occurred seven times. Five of the patients were children and none of them have shown any signs of improvement. One patient has permanent unilateral fourth and seventh nerve palsy in addition to eighth nerve deafness. Arthritis involving one or more joints occurred in 5 cases. All these patients recovered completely without aspiration or surgical drainage. Five patients showed severe meningococcic conjunctivitis on admission, but all recovered completely under the usual sulfonamide therapy together with local application of the drugs. The low incidence of hydrocephalus was remarkable. Only 1 child showed this complication. This was the infant, already described, who entered the hospital with well defined symptoms of subarachnoid block. One child aged 8 years, who was apparently normal before his attack of meningitis, has shown unmistakable evidence of mental retardation since recovery.

CONCLUSIONS

1. One hundred and ten patients with meningococcic meningitis were treated with sulfonamides at Sydenham Hospital in Baltimore between January 1938 and February 1942. None of the patients received specific antimeningococcus serum. No epidemic of meningitis occurred in Baltimore and the vicinity during the four year period studied.

2. Twelve of the 110 patients (11 per cent) died. Only two deaths occurred among 59 children under 15 years of age. One of 10 infants under 1 year of age died.

3. Despite its relatively low concentration in the spinal fluid, sulfathiazole was found to be strikingly effective. This drug and sulfadiazine are apparently superior to sulfanilamide in the treatment of meningococcic meningitis.

Harford Road and Herring Run.

8. Sadusk, J. F., Jr.; Blake, F. G., and Seymour, Anne: Observations on Absorption, Excretion, Diffusion and Acetylation of Sulfathiazole in Man, Yale J. Biol. & Med. **12**: 681 (July) 1940.

MENINGOCOCCIC MENINGITIS

PROGNOSTIC SIGNIFICANCE OF THE SPINAL FLUID SUGAR

EMILIE RUNDLETT, M.D.
ANGELO M. GNASSI, M.D.
AND
PRESTON PRICE, M.D.
JERSEY CITY, N. J.

Seventeen cases of meningococcic meningitis were admitted to this hospital during the period from July 1941 to March 1942. They afforded us an opportunity to verify two principles, namely (1) that the initial spinal fluid sugar content is inversely proportional to the virulence of the organism and (2) that in favorable cases there is a gradual increase in the spinal fluid sugar as the number of viable organisms is decreased. Repeated quantitative determinations of the spinal fluid sugar have made it possible to predict the outcome in cases showing no clinical improvement. It is to be emphasized that the result of the clashing forces, body resistances and virulence of the organisms determines the severity of the disease.

CLINICAL FEATURES AND COMMENT

All 17 patients presented classic signs and symptoms of meningitis on admission. Seven patients had petechiae, and of these 5 had bacteremia. The presence of a positive blood culture did not influence the course of the disease if no other complication appeared. However, three of six patients with bacteremia did have

Clinical Observations in Seventeen Cases of Meningococcic Meningitis

			Outstanding Symptoms				Spinal Fluid				Total Dose			
Case	Age	Sex	Coma	Delirium	Drowsiness	Petechiae	Smear	Culture	Blood Culture	Arthritis	Intravenous, Gm.	Oral, Gm.	Rectal, Gm.	Hematuria
1	36	♂	+	+	+	0	+	+	0	+	10	94	..	..
2	22	♂	+	+	+	+	0	+	0	..	3	46	15	+
3	23	♂	..	+	+	0	+	+	0	..	0	80	0	..
4	6	♂	..	..	+	0	+	+	0	..	0	32	0	+
5	18	♂	..	+	+	+	+	+	0	..	0	114	0	+
6	45	♀	..	..	+	+	+	+	+	..	4	132	0	..
7	50	♀	..	+	+	0	+	+	0	..	4	42	0	..
8	16	♀	..	+	+	0	+	+	0	+	0	67	0	..
9	4	♀	..	+	+	0	+	+	+	..	0	36	0	..
10	19	♂	+	+	+	0	+	0	0	..	19	112	..	..
11	16	♀	..	+	+	0	+	+	0	+	15	61	0	+
12	22	♂	..	..	+	0	+	+	0	+	8	45	..	..
13	48	♀	..	+	+	+	+	+	+	+	0	83	0	+
14	42	♀	..	..	+	+	+	+	+	+	5	74	0	..
15	7	♀	+	..	+	0	+	+	0	..	5	7	6	..
16	15	♀	+	..	..	+	+	+	+	..	8	46	11	..
17	27	♂	+	..	..	+	+	+	+	+	25	51	0	+

polyarticular arthritis and prolonged fever. This fever persisted in spite of chemotherapy well after the spinal fluid had returned to normal. Perhaps this lack of response to the drug suggests that the arthritis is allergic or toxic rather than bacterial in origin. Two patients had ptosis, which cleared up within three days in 1 instance and ten days in the other.

METHOD

Quantitative determinations of the spinal fluid sugar were done according to the well known method of Folin and Wu for blood sugar. Standards used contained 50, 25, 12.5 and 0 mg. of dextrose per hundred cubic centimeters. Colorimetric readings below 10 mg. per hundred cubic centimeters were considered unreliable and recorded merely as "less than 10 mg. per hundred cubic centimeters." Initial sugar determinations were, of course, done on admission, but all dextrose was withheld from the patients during the four hours previous to their subsequent lumbar punctures. On many specimens of spinal fluid, as well as on frequent blood specimens, a modification of the method

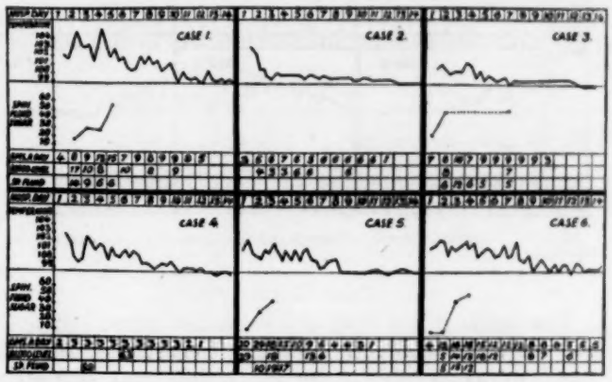

Chart 1.—Clinical course of meningococcic meningitis in cases 1, 2, 3, 4, 5 and 6.

of Bratton and Marshall was used for the free sulfadiazine content. Discrepancies between the spinal fluid level and the blood level in the accompanying charts are due to the fact that the specimens were not taken simultaneously.

SPINAL FLUID SUGAR CURVE

1. *Correlation with Smear and Culture.*—The spinal fluid of all patients which showed a gradual increase in sugar content had no growth of meningococci in mediums containing 5 mg. of para-amino-benzoic acid per hundred cubic centimeters. In only case 5 did a direct smear on a second specimen demonstrate organisms. When the sugar content reached a normal level the spinal fluid itself was invariably cloudy.

2. *Initial High Spinal Fluid Sugar.*—In cases 9, 10 and 15 the initial spinal fluid sugar was 40, 36 and 42 mg. per hundred cubic centimeters respectively and the infections were mild clinically with rapid recovery. In case 10 sulfadiazine was given for an infection of the upper respiratory tract on admission and the diagnosis of meningitis was made on the third hospital day.

3. *Initial Low Spinal Fluid Sugar.*—Cases 3, 5, 6, 7, 8, 12 and 16 represent the normal course of severe infections without arthritis. The spinal fluid sugar gradually rose to normal on the third to the fourth hospital day, while the temperature fell to normal, usually at the end of one week. In case 5, in which admission was made with the patient in coma, the spinal fluid sugar was normal on the third hospital day whereas the temperature remained 102 F. Some patients had a decided fall in temperature on their first day (case 12) but it soon rose and remained elevated until well after the spinal fluid sugar had become normal.

4. *Polyarthritis.*—Cases 1, 11, 13, 14 and 17 illustrate a persistent spiking temperature well after the spinal fluid sugar has returned to normal. Each of the patients in this group had polyarticular pain, redness

From the Contagious Disease Hospital and Laboratory of the Jersey City Medical Center.

and swelling which appeared usually on the third or fourth day. In spite of a rising or persistent fever, the normal sugar content of a moderately cloudy spinal fluid indicated that the meningeal infection was controlled. Of the 6 patients with positive blood cultures, arthritis developed in 4 of them.

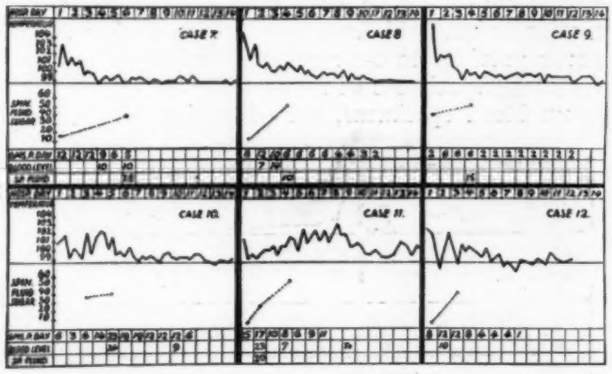

Chart 2.—Clinical course of meningococcic meningitis in cases 7, 8, 9, 10, 11 and 12.

CHEMOTHERAPY

The initial spinal fluid was examined bacteriologically and for sugar content. Therapy consisted of sulfadiazine [1] intravenously, orally or rectally and supportive treatment such as intravenous or subcutaneous fluids, sedation and special nursing care. The initial dose depended on the clinical condition of the patient, and the subsequent doses were regulated by the spinal sugar, sulfadiazine levels and clinical condition of the patient. A spinal fluid level of 8 to 12 mg. per hundred cubic centimeters was considered desirable for the usual case, and in 2 particularly severe infections a level over 20 mg. per hundred cubic centimeters was attained. It is worth while mentioning that in case 17 a total of 25 Gm. was given intravenously in the first twenty-four hours. This amount was sufficient to clear the spinal fluid on the fourth day. On the sixth day sulfadiazine was reinstituted for arthritis, and here, as in other instances, the course of the arthritis was not affected.

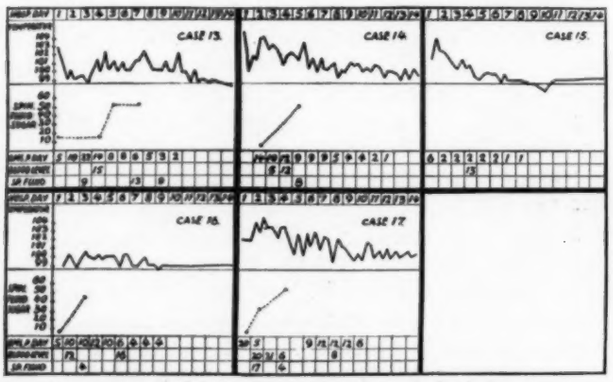

Chart 3.—Clinical course of meningococcic meningitis in cases 13, 14, 15, 16 and 17.

In 6 cases transient microscopic hematuria was noted, but this was not considered an indication to stop the drug. Instances of leukopenia or anemia were not encountered. Two children vomited the drug during the first few days of their disease but later retained the drug orally without difficulty.

1. Much of the sulfadiazine used was supplied by Dr. D. Brice of the Lederle Laboratories, Pearl River, N. Y.

The results of sulfadiazine therapy were uniformly successful, as in the report of Dingle, Thomas and Morton [2] in which but one death occurred.

CONCLUSIONS

1. Seventeen consecutive patients with meningococcic meningitis were treated with sulfadiazine with no mortality.

2. A rise in the cerebrospinal fluid sugar is a favorable sign and usually precedes cytologic or clinical improvement. It gives rapid indirect evidence of the bacteriologic status of the spinal fluid more accurately than smear, culture or cell count. However, the latter procedures should not be omitted.

3. Sulfadiazine did not influence the course of arthritis of these patients.

4. Rectal administration of sodium sulfadiazine may be used as an adjuvant, but an adequate blood level is not obtained by this route alone.

Since this paper was submitted for publication, 6 additional patients with meningococcic meningitis were admitted and treated at our hospital. This represents a series of 23 consecutive patients treated with sulfadiazine without a death.

ARTERIOSCLEROSIS AND VARICOSE VEINS: OCCUPATIONAL ACTIVITIES AND OTHER FACTORS

A STUDY OF 536 PERSONS, DIVIDED INTO AGE GROUPS, WHO HAD BEEN SITTING, STANDING, WALKING OR CLIMBING STAIRS FOR TEN YEARS OR MORE AT THEIR WORK

MICHAEL LAKE, M.D.
GERALD H. PRATT, M.D.
AND
IRVING S. WRIGHT, M.D.
NEW YORK

The present study was undertaken with the primary objective of developing data which might throw further light on our understanding of the production of arteriosclerosis. It was appreciated that certain other facts of interest might be uncovered as the investigation progressed.

Although years of study by numerous workers have been devoted to this great enigma of biology, it can be fairly stated that today it is not known whether arteriosclerosis should be considered as a disease or as a purely degenerative process. The fundamental importance of diet, climate, infection, metabolism, race, heredity and many other factors is yet to be finally evaluated. Age alone does not appear to be responsible, since arteriosclerosis may be present in some persons at 30 years or less, whereas others may show practically none at the age of 70.

A popular hypothesis has been that arteriosclerosis is related to prolonged stress and strain on the arteries in question. In favor of this theory is the oft observed development of calcified plaques at the points of greatest stress in the vessel walls. Aside from this example,

2. Dingle, John H.; Thomas, Lewis, and Morton, Allan R.: Treatment of Meningococcic Meningitis and Meningococcemia with Sulfadiazine, J. A. M. A. **116**: 2666 (June 14) 1941.

Read in part before the Section for the Study of the Peripheral Circulation, American Heart Association, Cleveland, May 30, 1941.

From the Medical Department of R. H. Macy & Co., Inc., and the Vascular Clinic of the New York Post-Graduate Medical School and Hospital, Columbia University.

The statistical analyses were made by Miss M. C. McDonnell.

what constitutes wear and tear on the arteries is an open question. In opposition to this belief, as pointed out by Fox,[1]

> the relation of arteriosclerosis to forced work is nil in the wild animals. If one considers the activity of an animal in its enclosure, one finds that those animals that prance, jump, run and climb the most are least affected while those which are rather quiet exhibit the highest incidence of lesions. Those that best illustrate the most pronounced forms of arteriosclerosis—bovine, parrot and ducks—are relatively placid animals.

And again, "Arteriosclerosis is not confined to the beasts, like horses, that work hard, but also occurs in the placid duck." This and other paradoxical evidence regarding the relation of prolonged physical stress and strain to the development of arteriosclerosis served as stimulation to study of the problem herein presented.

PURPOSES

The questions concerning which we hoped to obtain information were:

1. What is the incidence of arteriosclerosis and of varicose veins in the lower extremities in a normal working population of the two sexes of various age groups?
2. Does prolonged physical stress and strain or posture affect the degree or the rate of production of arteriosclerosis?
3. Does prolonged physical stress and strain or posture affect the degree or the rate of production of varicose veins?
4. Does the use of tobacco or alcohol influence the degree or the rate of production of arteriosclerosis?
5. Is there a difference in the tendency toward the development of arteriosclerosis or varicose veins between persons of the two sexes who have been undergoing similar occupational activity for ten years or more?
6. Is there any relation between hypertension and the development of arteriosclerosis?
7. Do arteriosclerosis and varicose veins tend to occur together?

PERSONS STUDIED

A series of 536 persons over 40 years of age representing four different types of occupational activity was studied. Workers of both sexes were included. The classifications comprised persons who had for ten years or more been predominantly:

1. Sitting: Typists, clerical workers and other persons engaged in work which was mainly done sitting.
2. Standing: Elevator operators, clerks selling behind counters and other persons engaged in work requiring standing.
3. Walking: Special policemen, porters, cleaning women, furniture salesmen and so on.
4. Climbing Stairs: Delivery men and other persons climbing stairs most of the time.

A large department store offered an excellent opportunity for studies of persons of these classifications. The average duration of employment at the same occupation of the men in the series was approximately twenty years and that of the women seventeen years. The average age for men was 52.6 years ± 7.7 years and that for women 50.8 ± 7.1 years. Of the persons studied, 51.5 per cent were over 50 years of age.

METHODS

Each person had, in addition to a complete physical examination, study of the lower extremities by the following technics:

1. Determination of any history of pain on walking relieved by rest.
2. Inspection for rubor on dependence and pallor on elevation.
3. Palpation of arteries and palpation and inspection of veins.
4. Oscillometric studies at four levels: foot, above ankles, calf and thigh.
5. Complete roentgenographic studies of the soft tissues.

CRITERIA

The first three technics were found to be subject to individual interpretation, so that for the purpose of this study any person presenting positive evidence in response to only one of these (history, rubor and pallor or absence of pulse) was considered not to have arteriosclerosis of the arteries of the legs.

TABLE 1.—*Incidence of Arteriosclerosis of the Leg Arteries in All Groups in the Study*

Age Groups	Total in Group	With Arteriosclerosis		Disease Revealed by Roentgen Examination		
		Number	Percentage	Total with Calcification	Number with Calcification Only	Disease Revealed by Other Evidence
Men						
All groups	395	141	46	135	115	6
Standers	80	38	43	35	30	3
Walkers	129	64	50	62	54	2
Sitters	40	16	40	16	15	..
Stair climbers	47	23	39	22	16	1
40 to 49	137	34	27	30	27	4
Standers	40	7	17	5	5	2
Walkers	52	12	23	11	11	1
Sitters	16	4	..	4	4	..
Stair climbers	29	11	..	10	7	1
50 to 59	104	57	55	55	48	2
Standers	32	17	..	16	15	1
Walkers	49	29	59	28	22	1
Sitters	11	4	..	4	4	..
Stair climbers	12	7	..	7	7	..
60 and over	64	50	77	50	40	..
Standers	17	14	..	14	10	..
Walkers	28	23	..	23	21	..
Sitters	13	8	..	8	7	..
Stair climbers	6	5	..	5	2	..
Women						
All groups	231	46	20	42	32	4
Standers	107	22	21	20	16	2
Walkers	56	10	18	9	6	1
Sitters	66	13	19	12	10	1
Stair climbers	2	1	..	1	..	..
40 to 49	123	10	8	10	7	..
Standers	48	3	6	3	2	..
Walkers	28	4	..	4	3	..
Sitters	46	3	6	3	2	..
Stair climbers	1	..	..	..	..	..
50 to 59	81	21	26	19	16	2
Standers	43	11	27	10	9	1
Walkers	22	2	..	2	1	..
Sitters	16	8	..	7	6	1
Stair climbers	..	..	..	..	..	..
60 and over	27	15	..	13	9	2
Standers	16	8	..	7	5	1
Walkers	6	4	..	3	2	1
Sitters	4	2	..	2	2	..
Stair climbers	1	1	..	1	..	..

It was realized also that spasm might play an important role in many of the series who had subnormal oscillometric readings.[2] In order to eliminate spasm as nearly as possible, only those persons who presented some evidence of arterial disease other than subnormal oscillometric readings and those who had subnormal readings which remained low after warming of the extremities in a foot bath for twenty minutes at 96 to 98 F. were considered to have arterial disease.

With the oscillometer used, evidence of disease was considered to be readings of only a faint trace (⅛

1. Fox, Herbert: Arteriosclerosis in Lower Mammals and Birds: Its Relation to the Disease in Man, chapter 6, p. 153, Arteriosclerosis, edited by E. V. Cowdry, New York, Macmillan Company, 1933.

2. It was impossible to perform experiments with nerve blocks or reflex dilatation on so large a series.

degree or less for each foot) or of zero over the arch of at least one foot (normal being ¼ to 1 degree).

That the disease demonstrated by the oscillometer in this series was due predominantly to arteriosclerosis rather than to thromboangiitis obliterans will be demonstrated later.

Roentgenograms of the soft tissue were studied for evidence of calcification and were graded as 1 to 4 plus

TABLE 2.—*Incidence of Arterial Impairment According to Sex and Age*

	40-49 Years	50-59 Years	60 Years and Over	Total
Men	27%	55%	77%	46%
Women	8%	26%	56%	20%

TABLE 3.—*Incidence of Arterial Involvement Among Men Aged 40 to 49*

	Total	Number with Arterial Involvement	Percentage
Stair climbers	29	11	38
Others	108	23	21

in accordance with the degree of severity noted. All calcification shown by roentgenogram was considered to be positive evidence of arteriosclerosis.

It is accepted that the presence of calcification in the arterial walls does not necessarily indicate occlusion or even narrowing of the lumen but nevertheless is definite evidence of arteriosclerosis.

Arteriosclerosis or other disease of the minor vessels in the absence of the changes in major vessels is frequently not detected by roentgen examination, and undoubtedly minor grades of arteriosclerosis were not included.

A certain amount of the material became irrelevant as the work progressed, and in some instances the age group or occupational classification was too small to prove statistically significant. Consequently the data reported is condensed and confined to what we feel to be the most significant facts.

RESULTS

The term arteriosclerosis whenever used in this paper refers to the presence of arteriosclerosis in the arteries of the legs, and calcification refers to calcification in the arteries of the legs. Table 1 indicates the distribution of these conditions in the various age groups and occupational classifications.

SEX AND AGE DIFFERENCES

The total incidence of arteriosclerosis in this series of actively employed people over 40 years of age was found to be 35 per cent. There was a decided difference for the sexes, the incidence for men being 46 per cent and that for women being 20 per cent. As would be expected, there was also an increased percentage of vascular disease with advancing age (table 2).

Arteriosclerosis appeared to develop about a decade later in women than in men.

Occupational Differences.—In order to rule out differences due to age and sex, our results were studied for the two sexes by decades and by the four occupational classifications mentioned. The only statistically significant difference due to occupation (table 3) was found among men in the age groups 40 to 49, who showed a much higher incidence of arterial involvement in stair climbers (38 per cent) than in those not climbing stairs (21 per cent). There is not more than one chance in one hundred that this difference is due to sampling.[3]

The number of women stair climbers was too small for statistical analysis. We were unable to show any significant differences among standers, walkers and sitters.

In the age group 50 to 59, the incidence of arteriosclerosis in men who climbed stairs (58 per cent) was no greater than in those who stood (53 per cent) or those who walked (59 per cent). The sitters had a lower incidence (36 per cent), but there were not enough men in this classification for the low figure to be considered statistically significant. This was also true of men over 60.

Among the women there was no difference at all between those who stood (6.2 per cent) and those who sat (6.3 per cent). The walkers had a higher incidence (14 per cent), but this also was not considered to be a significant difference.

Roentgenographic Changes.—The majority of the instances of pathologic change in both sexes were revealed by roentgenograms. Among the women 91 per cent of the instances of disease were detected by this means, and among the men 95 per cent. Had we used calcification as the only basis for diagnosis the conclusions would have been essentially the same as they were when all cases of arterial involvement were included (table 4).

The difference in the degree of calcification in the two sexes proved to be most interesting. The men had a much higher incidence of roentgenographic changes than did the women. They also showed a much higher percentage of severe (3 and 4 plus) calcification, the incidence being 30 per cent for the men and 12 per cent for the women.

There were no instances of 4 plus changes among the women, but there were 12 cases of such changes among the men. There were 5 cases of 3 plus changes among the women and 29 cases among the men. Every occupational classification was represented, although there was no statistical significance in any of the differences.

TABLE 4.—*Incidence of Calcification by Severity in the Two Sexes*

	Total	Number with Calcification	Number with 3 and 4 + Calcification
Men	305	135 (44%)	41 (30%)
Women	231	42 (18%)	3 (12%)

TABLE 5.—*Incidence of Plaques by Age Groups*

Age Groups (Both Sexes)	Number with Calcification	Percentage with Plaques
40-59	40	7
50-59	74	15
60 and over	63	29

3. The formula used was $\delta d = \frac{\sqrt{pq\,1 + 1,}}{n_1 \quad n_2}$, in which
p = total percentage of occurrence,
q = 1 — p,
n_1 = number in first sample and
n_2 = number in second sample.
It was necessary for the actual difference between the two proportions to be at least 2.4 times the standard error of the difference in order to be considered significant.
As a check on this formula, the chi square test, $\chi^2 = m_1 \log m_1 + m_2 \log m_2 + n_1 \log n_1 + n_2 \log n_2 + (M + N) \log (M + N) - M \log M N \log N - (m_1 + n_1) \log (m_1 + n_1) - (m_2 + n_2) \log (m_2 + n_2)$, was applied, and the results agreed with the first formula.

Calcification with Plaques: Plaques were noted in 18.5 per cent (25) of the men with calcification and in 14.3 per cent (6) of the women. The persons who had 1 and 2 plus calcification had the highest incidence of plaques: 23.4 per cent. Of the persons showing 3 and 4 plus roentgenographic changes, only 9.7 per cent had plaques.

TABLE 6.—*Incidence of Arterial Disease Among Persons Who Used Tobacco and Those Who Did Not*

	Percentage With Pathologic Changes	Percentage Without Pathologic Changes
Men		
Tobacco	45.8	54.2
No tobacco	46.9	53.1
Women		
Tobacco	20.0	80.0
No tobacco	19.9	80.1

TABLE 7.—*Incidence of Arterial Disease Among Persons Who Used Alcohol and Those Who Did Not*

	Percentage With Pathologic Changes	Percentage Without Pathologic Changes
Men		
Alcohol	46.3	53.7
No alcohol	45.7	54.3
Women		
Alcohol	19.5	80.5
No alcohol	20.1	79.9

All the men who showed plaques had normal oscillometric readings. One of the women who had plaques had subnormal oscillometric readings.

As would be expected, the incidence of plaques increased with age (table 5).

Oscillometric Readings.—The incidence of subnormal oscillometric readings was higher for women with arterial involvement (21.7 per cent) than for men (9.2 per cent). Spasm was a more frequent factor in women than in men. This fact was demonstrated by rechecking of the oscillometric readings after use of warm foot soaks previously mentioned.

Subnormal Oscillometric Readings Considered as Evidence of Arteriosclerosis: It is felt that the subnormal oscillometric readings in this study can be considered for the most part as evidence of arteriosclerosis. The lesion most likely to be confused would be thromboangiitis obliterans. We do not believe that this is an important factor in the present series for the following reasons:

1. No definite case of thromboangiitis obliterans was encountered.
2. Among the men, in whom one would expect to encounter thromboangiitis obliterans most frequently, the greater incidence of the disease as discovered was in the form of calcification.
3. The incidence of oscillometric evidence of occlusion was equal among the women and among the men.
4. Less than 1 per cent of patients with thromboangiitis obliterans are women.

Symptoms.—Questions relative to pain in the legs and feet were asked in an effort to ascertain the presence of symptoms referable to the disease. Only those persons who gave a specific history of pain on walking relieved by rest were considered as having significant symptoms. Those having other reasons for pain, such as arthritis or weak feet, were not considered as having relevant symptoms.

Only 5.6 per cent of the men and 4.3 per cent of the women who proved to have definite pathologic changes had such complaints.

A question may be raised here regarding the small percentage of employees with definite arterial disease who had symptoms. While the employment factor may have decreased the number of employees who admitted symptoms, it must be remembered that the subjects were active, working people and that if they had pain of any great severity related to activity they would be unable to work.

Tobacco and Alcohol.—The effect of the use of tobacco on the production of arteriosclerosis also was investigated. Of the men 62.9 per cent and of the women 23.8 per cent smoked. The incidence of arteriosclerosis was exactly the same among those who used tobacco as among those who abstained (table 6).

Tobacco apparently played no determinable part in the incidence of arteriosclerosis in this series. This statement should not be interpreted as decreasing the importance of abstinence from the use of tobacco in cases of already existing vascular disease. It has been proved that the use of tobacco may in such cases produce sufficient vasospasm of the collateral vessels to interfere with the nutrition of the tissues and result in gangrene.

The use of alcohol and its effect on the statistics was studied with similar results (table 7).

It seems that the use of alcohol did not play a determinable part in the incidence of arteriosclerosis in this series. The figures reported have no bearing on the therapeutic value of alcohol in obliterative arterial disease, in which its vasodilating effects are fully recognized. While any attempt to indicate the amount of alcohol habitually consumed would be unreliable, the figures given are fairly reliable, since 72.7 per cent of the men and 35.5 per cent of women admitted using alcohol to some degree.

The Relation of Hypertension and Arteriosclerosis.—The incidence of arteriosclerosis in persons with hypertension was next subjected to analysis. A systolic pressure of 150 mm. of mercury was arbitrarily selected as the upper limit of normal blood pressure.

TABLE 8.—*Incidence of Arteriosclerosis Among Persons with Hypertension and Those with Normal Blood Pressure*

	Total	Number with Arterial Involvement	Percentage
All persons with hypertension	147	68	46.3
All persons with normal blood pressure	389	115	29.6*
Men with hypertension	76	48	63.1
Men with normal blood pressure	229	93	40.6
Women with hypertension	71	20	28.2
Women with normal blood pressure	160	22	13.8

* There is only one chance in one hundred that this difference is due to sampling.

TABLE 9.—*Incidence of Hypertension*

	Total	Number with Hypertension	Percentage
Men	305	76	24.9
Women	231	71	30.4

A greater incidence of arteriosclerosis was found among the persons with hypertension than among those without hypertension (table 8). It is interesting to note that 63 per cent of the hypertensive men had arteriosclerosis. Only 28.2 per cent of the women with hypertension had arteriosclerosis.

The incidence of hypertension was slightly higher for women than for men (table 9).

We conclude from these figures that hypertension and arteriosclerosis tend to occur together in both sexes but that either may occur independently.

Varicose Veins.—Studies of the incidence of varicose veins also revealed interesting material. Of all persons over 60 years of age, 73 per cent were found to have visible varicose veins. There was a decided difference between the two sexes in the incidence of varicose veins. In order to rule out the possibility of pregnancy's influencing the percentage of women with varicose veins, women who had never had a pregnancy were also considered (table 10).

TABLE 10.—*Incidence of Varicose Veins*

	Total	Number with Varicose Veins	Percentage with Varicose Veins
Men	305	125	40.7
Women	231	167	73.2
Never pregnant	133	89	66.9
One or more pregnancies	98	78	79.5

From the figures we can conclude that women over 40 have a higher incidence of varicose veins than men of the same age and that this difference is not entirely due to pregnancy, since the incidence was higher even when the pregnancy factor was removed from the data.

A possible explanation for the difference according to sex may include the noticeable difference in the firmness of the surrounding tissues supporting the venous back pressure, especially during the periods of engorgement of the female pelvic organs. The greater use of the leg muscles in the male, with more active emptying of the veins, may also be a factor.

The occupational occurrence of varicose veins in men and in women who had never been pregnant was then studied. The men who climbed stairs had the lowest incidence, while the other three classifications varied only slightly.

Among women, those who sat at their work had the lowest incidence, with the walkers having a slightly higher incidence. However, there was not a large enough difference to prove statistically significant (table 11).

The only classification that had the same incidence of varicose veins in the two sexes was the sitters. In all other occupations the women showed a much higher incidence than the men.

TABLE 11.—*Incidence of Varicose Veins by Sex and Occupation*

	Men		Women (Never Pregnant)	
	Total	Number with Varicose Veins	Total	Number with Varicose Veins
Standers	89	36 (40.5%)	63	47 (73.8%)
Walkers	129	53 (41.0%)	28	19 (67.9%)
Sitters	40	20 (50.0%)	42	23 (56.8%)
Stair climbers	47	16 (34.0%)	..	.....

It appears that when the weight of the venous blood column is increased by standing or walking there is produced a decided increase in varicose veins in women but not in men.

Relation of Varicose Veins to Arterial Disease: There seems to be a significantly higher incidence of arterial disease in men with varicose veins. This was true of all age groups. In women the difference, while also present, is not statistically significant [4] (table 12).

4. To be considered statistically significant a difference would have to be at least 15 per cent. The actual difference is only one and four-tenths times the error of the difference. It is necessary for the error to be at least two and four-tenths times the difference, which in this case would be approximately 15 per cent.

This finding is consistent with the results obtained by one of us in improving arterial circulation in cases of advanced occlusion by eliminating the attendant varicose veins.[5]

COMMENT

In this study of the relation between sex, occupation, age, tobacco, alcohol, pregnancy and hypertension and the development of arteriosclerosis and varicose veins in the lower extremities, certain interesting observations have been made.

Roentgen examination provided the most important single method of detecting arterial changes in this series. There were, however, a few cases in which arteriosclerosis in the legs was detected by the oscillometer without changes being demonstrable by roentgen examination.

While the figures presented are not of sufficient volume to constitute final evidence, the statistics obtained and subjected to analysis point to the probability that arteriosclerosis of the leg arteries develops earlier in men who climb stairs than in men who do not. The statistical difference was considered significant for the age group 40 to 49, but of no consequence in later decades. This variation on inquiry did not appear to be due to occupational shift, so that the reason was not obvious. The incidence of arteriosclerosis did not seem to vary significantly in the other three occupational classifications. Men showed a higher incidence of arteriosclerosis than did women of the same age groups who had worked at exactly the same types of occupations.

TABLE 12.—*Incidence of Arterial Disease Among Persons with Varicose Veins*

	Total	Number with Arterial Disease	Percentage
Men with varicose veins	125	74	59.2
Men with no varicose veins	180	67	37.2
Women with varicose veins	167	37	22.2
Women with no varicose veins	64	9	14.0

Had roentgenographic evidence alone been used, these conclusions would not be changed.

While the incidence of subnormal oscillometric readings was small in this series of actively employed persons, the oscillometer was responsible for detecting a larger percentage of arterial disease in women than in men.

Of the men who had calcification, 41 (30.4 per cent) showed 3 and 4 plus roentgenographic changes. Of the women, 5 (11.7 per cent) showed 3 plus changes. The women showed no 4 plus changes. The old explanation for such observations, namely that women live a more sheltered and less active existence, was clearly eliminated in this study. The explanation is not completely clear, but the results of an experimental study of cholesterol fed rabbits by Ludden, Bruger and Wright [6] may be of interest in this regard. In a doubly checked series it was found that the administration of testosterone propionate and estradiol dipropionate exerted no noteworthy inhibitory influence on the development of arteriosclerosis in male rabbits fed cholesterol. In female rabbits, however, the development of hypercholesteremia was definitely inhibited and the deposition of cholesterol in the aorta was prevented

5. Pratt, G. H.: Segmental Sclerosis of the Saphenous Veins for Varicose Veins, Ulcers and Diminished Arterial Supply, J. A. M. A. **113**: 925-927 (Sept. 2) 1939.

6. Ludden, J. B.; Bruger, Maurice, and Wright, I. S.: Experimental Atherosclerosis: IV. Effects of Testosterone Propionate and Estradiol Dipropionate on Experimental Atherosclerosis in Rabbits, Arch. Path. **33**: 58 (Jan.) 1942.

by the administration of these steroid hormones. In later studies by Bruger [7] it was shown that castration prevented this protection in the female. It appears, therefore, that at least in man and in the rabbit there is a definite difference between the two sexes in the reaction of the arterial walls toward atheromatous-like changes. The exact mechanism is not yet understood.

It appears conclusively proved that neither tobacco nor alcohol had any effect on the development of arteriosclerosis in this series.[8]

The incidence of arteriosclerosis was considerably greater among persons with hypertension than among persons who had normal blood pressure.

Many of the subjects were found to have definite arteriosclerosis, some with considerable calcification, and yet had no complaints of pain or fatigue in the lower extremities.

A decided difference between the sexes was noted in the studies of the incidence of varicose veins (40.7 per cent in men; 73.2 per cent in women). While pregnancy accounted for some of this variation, even among the women who had never been pregnant 67 per cent showed varicose veins. It was also interesting that the women who sat at their work had definitely fewer varicosities than either those who stood or those who walked, but the men showed no increase at all on standing and walking as against sitting. These observations regarding varicose veins may be associated with the fact that the surrounding tissues of the female are softer and less supportive to the vein walls and also that at times of pelvic congestion there may be a great tendency to back venous pressure. It is also possible that the high incidence of varicose veins in working women over 40 years of age may be related to the wearing of high heels, with resulting compression of the soft vein walls by the leg muscles. Studies in these fields are suggested.

There seems to be some evidence in favor of a definite relation between the development of arteriosclerosis and varicose veins in men. Such a relation in women is not clearly demonstrated by our data.

This study will be of interest particularly in connection with the mobilization of men over 40. In addition, the necessity of manning and fighting from bases in extreme frigid temperatures, such as Alaska and Iceland, will increase the importance of the arteriosclerotic problem.

CONCLUSIONS

1. Men had a higher incidence of arterial disease than did women of the same ages who had been employed at similar occupations an equal length of time. Among the younger men (age group 40 to 49) stair climbing apparently produced a significantly higher incidence of arteriosclerosis than did standing, sitting or walking. No significant difference could be established among the last three classifications. Over the age of 50 there were no significant differences in the incidence of arterial disease in any of these classifications.

2. The use of alcohol and tobacco did not influence the incidence of arteriosclerosis in the series studied.

3. There was a definite relation in both sexes between the incidence of hypertension and of arteriosclerosis of the lower extremities.

4. Women showed a much higher incidence of varicose veins than men employed at the same occupations. This difference held true even when the factor of pregnancy was removed from the data. Women who had been pregnant showed a higher incidence of varicose veins than women who had never been pregnant. Varicose veins were extremely common among the working women of this series.

5. Women who stood or walked showed a much higher incidence of varicose veins than those who sat at their work.

6. This difference was not found in men.

7. There was a higher incidence of arteriosclerosis of the leg arteries in men with varicose veins. This difference was not statistically established in women.

7. Bruger, Maurice: Unpublished results.

8. The findings in reference to alcohol are in complete agreement with the work of M. A. Ruffer, who performed autopsies on over 800 Mohammedan pilgrims and found arteriosclerosis as common as in Europeans (Studies on the Paleopathology of Egypt, Chicago, University of Chicago Press, 1921). The Mohammedans are exceptionaly strict in their total abstinence from alcohol.

RENAL COMPLICATIONS OF SULFADIAZINE

WALTER A. KEITZER, M.D.
AND
JOHN A. CAMPBELL, M.D.
AKRON, OHIO

The recent literature concerning sulfapyridine and sulfathiazole renal calculi, causing anuria with at least six deaths reported in a summary of the literature out of 29 cases by Kawaichi and Rogers,[1] and 2 deaths reported by Lindner and Atcheson,[2] testifies to the lethal qualities of these drugs. That the new drug sulfadiazine should be devoid of these serious complications, as was suggested by experimental and clinical reports, was optimistic to say the least. Trevett, Nelson and Long [3] found only 4 instances of hematuria, with renal colic in only 2 of 125 patients given sulfadiazine. Billings and Wood [4] treated 105 patients with pneumonia using sulfadiazine intravenously and orally without a single renal complication, i. e. hematuria, renal colic, oliguria or anuria. Borst [5] states that the crystals of the acetylated and active free forms of sulfadiazine are extremely soluble, so that renal damage is nil. Finland, Strauss and Peterson [6] in their treatment of 446 patients with sulfadiazine reported only 3 patients having hematuria, 1 of whom had renal colic with anuria requiring ureteral catheterization. Only 1 other patient has been reported in the literature by Hughes, Sayen and La Towsky [7] as having anuria.

In spite of this evidence of the low incidence of renal complications in the literature, we have seen 11 patients with various types of renal symptoms or anuria due to sulfadiazine alone, and we have seen as many patients with renal complications due to the other sulfonamides. We feel that there exists a false sense of security concerning sulfadiazine, which should be modified because of its increased use in military medicine. One can imagine one's embarrassment trying to treat a soldier

From the Department of Urology, the City Hospital.

1. Kawaichi, George K., and Rogers, W. Barnes: Urinary Calculi from Sulfonamides, Urol. & Cutan. Rev. **45**: 477 (Aug.) 1941.
2. Lindner, H. J., and Atcheson, D. W.: Sulfathiazole Crystallization in the Kidney, J. Urol. **47**: 262 (March) 1942.
3. Trevett, G. I.; Nelson, R. A., and Long, P. H.: II. Studies in Sulfadiazine, Bull. Johns Hopkins Hosp. **69**: 303, 1941.
4. Billings, F. T., Jr., and Wood, W. Barry, Jr.: III. Studies on Sulfadiazine, Bull. Johns Hopkins Hosp. **69**: 314, 1941.
5. Borst, Roscoe C.: The Effectiveness of the Sulfonamides on the Bacteria Encountered in Infection of the Upper Part of the Urinary Tract, New York State J. Med. **42**: 216 (Feb. 1) 1942.
6. Finland, Maxwell; Strauss, Elias, and Peterson, O. L.: Sulfadiazine, J. A. M. A. **116**: 2641 (June 14) 1941.
7. Hughes, P. B.; Sayen, J. J., and La Towsky, L. W.: Sulfadiazine Calculi in the Urinary Tract, J. Urol. **47**: 274 (March) 1942.

in the jungles of Malaya or the deserts of northern Africa if he is suffering with anuria due to the sulfonamides.

The following 4 cases required cystoscopy and ureteral catheterization:

CASE 1.—J. S., a white man aged 36, was admitted to the hospital on Oct. 30, 1941 with a cellulitis of the leg. He was given an average of 5 Gm. of sulfadiazine daily for nineteen days, at which time he developed right renal pain and oliguria, which progressed rapidly to anuria. The urinalysis reported gross hematuria. The average daily blood level was 10 mg. per hundred cubic centimeters, the highest being 13.9 mg. per hundred cubic centimeters; the nonprotein nitrogen was 52 mg. per hundred cubic centimeters. A cystoscopy on November 18 showed coarse orange crystals in both ureteral openings and on the bladder floor. There was 15 cc. of red brown syrupy urine aspirated from the right kidney pelvis and 7 cc. from the left kidney pelvis. The catheters were left indwelling for forty-eight hours and they were irrigated every two to four hours with isotonic solution of sodium chloride. After removal of the catheters the patient continued to complain of left renal colic for the following ten days. An intravenous pyelogram was made which showed nonfunction of the left kidney.

On November 28 a cystoscopy and dilation of the left ureter were done. Fifteen cc. of old bloody urine was obtained from the left pelvis. The patient immediately improved and was discharged home on December 12.

CASE 2.—R. K., a white man aged 24, admitted to the hospital on Jan. 13, 1942 with pneumonia, received 4 Gm. of sulfadiazine daily for seven days. The drug was then stopped for eight days. He was given 8 Gm. on February 19 and 12 Gm. the following day, whereupon he developed renal colic over first the left and then the right kidney. Oliguria, followed rather rapidly by anuria, occurred on the third day. The blood sulfadiazine was 9.6 mg. per hundred cubic centimeters. The bladder was catheterized and only 50 cc. of bloody urine obtained. A cystoscopy was done and many orange colored calculi were found on the bladder floor, varying in size from a glass headed pin to very small crystals. The ureteral orifices showed small crystals protruding from them. There was 20 cc. of muddy appearing urine from the right pelvis and 15 cc. from the left pelvis. The indwelling ureteral catheters were irrigated with warm isotonic solution of sodium chloride every two to four hours for thirty-six hours. Retrograde pyelograms showed bilateral, small, nonopaque calculi. The patient gradually improved over a period of five days before he was free from all symptoms. He was discharged on February 28.

CASE 3.—R. O., a white man aged 21, admitted on Feb. 24, 1942 with a compound fracture of the maxilla, a fracture of the nose and facial lacerations, was given 6 Gm. of sulfadiazine daily for six days. On the sixth day, the blood sulfadiazine was 8 mg. per hundred cubic centimeters; his intake of fluid was 4,560 cc. and his output 1,120 cc. He developed renal colic on the right side. On the seventh day his intake was 7,580 cc. and his output was only 620 cc. Urinalysis showed a decreased specific gravity, hematuria and many sulfadiazine crystals. He appeared edematous. Cystoscopy and ureteral catheterization were done on March 5, it first being necessary to do a circumcision because of phimosis. The cystoscopy showed a reddish brown bladder urine and a few calculi and crystals on the bladder floor. The right ureteral orifice showed definite bullous edema, as is characteristic in many lower ureteral calculi. The left orifice showed a few crystals protruding from the meatus, but no edema. There was 15 cc. of thick bloody urine from the right pelvis, but no residual urine was obtained from the left, owing to mechanical reasons. The ureteral catheters were irrigated with warm isotonic solution of sodium chloride at frequent intervals for thirty-six hours. Retrograde pyelograms were made which showed minimal hydronephrotic changes in both kidneys. The patient was completely relieved in five days and was discharged on March 10.

CASE 4.—H. B., a white man aged 59, was admitted on March 2, 1942 with a cellulitis of the chin. He received 8 Gm. of sulfadiazine daily for four days, when he complained of colic-like pains over both renal areas, radiating to the groins. His intake on the fourth day was 5,580 cc. and his output was 1,500 cc. of urine. It became increasingly more difficult for the patient to void, and the amount of urine decreased. Urinalysis showed hematuria and albuminuria, with low specific gravity. The sulfadiazine blood level was 11 mg. per hundred cubic centimeters and the nonprotein nitrogen 82 mg. per hundred cubic centimeters. In view of the high blood nitrogen with oliguria, it was felt imperative to do a cystoscopy on March 6. This showed about 2 Gm. of orange colored crystals on the floor of the bladder, which apparently had collected there because of moderate hypertrophy of the prostate with a resulting residual urine. These crystals were recovered and found to consist entirely of acetyl sulfadiazine. The prostate gland showed a 2 plus lateral lobe and median commissure hypertrophy. The right ureteral orifice had typical bullous edema, while the left appeared normal. There was 15 cc. of red brown syrupy urine aspirated from the right pelvis and 3 cc. from the left pelvis. The ureteral catheters were irrigated at frequent intervals for forty-eight hours with warm saline solution. Retrograde pyelograms showed probable nonopaque renal and ureteral calculi in both renal pelves and ureters. The patient continued to have left ureteral and renal colic for a period of five days after removal of the catheters. His residual urine was reduced to 50 cc. The patient refused transurethral prostatectomy and he was discharged home on March 19 with nonprotein nitrogen of 40 mg. per hundred cubic centimeters.

The following 7 cases are reported because they illustrate varying degrees of renal complications but were treated conservatively. In the 6 fatal cases summarized by Kawaichi and Rogers, only conservative treatment was employed.

CASE 5.—D. L., a white boy aged 9 years, was admitted to the hospital on Feb. 17, 1942 and operated on for acute appendicitis. An intussusception and an abscess over the appendical stump developed, for which reoperation was performed. He was then given 5 Gm. of sulfadiazine for five days. On the fifth day oliguria appeared with hematuria, and the urine output for twenty-four hours was 150 cc. The urine showed hematuria, albuminuria and many crystals. The blood sulfadiazine was 14.5 mg. per hundred cubic centimeters. The drug was stopped, fluids were urged orally and the patient was completely relieved in two days. He was discharged on his twenty-fourth hospital day.

CASE 6.—M. G., a white girl aged 10 years, admitted to the hospital on Jan. 31, 1942 with an acute osteomyelitis of the right hip, was given 6 Gm. of sulfadiazine daily for ten days. On the fifth day of the administration of the drug oliguria appeared for twenty-four hours, her output being 240 cc. of urine which had a reduced specific gravity and was bloody. The peak blood level was 9.8 mg. per hundred cubic centimeters and the nonprotein nitrogen 34 mg. per hundred cubic centimeters. No treatment other than forcing fluids was attempted, and the drug was continued for five days. The oliguria disappeared, but the hematuria persisted until the drug was discontinued. The patient was discharged with a normal urine on the seventeenth hospital day, February 17.

CASE 7.—J. W., a white woman aged 36, admitted to the hospital on Feb. 22, 1942 with first and second degree burns, was given sulfadiazine in the wounds and 6 Gm. daily by mouth for six days. Her intake was 1,500 cc. and output 1,000 cc. On the sixth day she developed nausea and renal colic on the left side. Urinalysis showed a decreased specific gravity, hematuria and many crystals. No oliguria was present. The drug was stopped and 1,500 cc. of fluid given intravenously for a total intake of 2,300 cc. and 1,300 cc. output the following day. The pain stopped immediately and the urine cleared rapidly. She was discharged home with a normal urine on the seventeenth hospital day.

CASE 8.—W. C., a white man aged 41, admitted on Jan. 8, 1942 with a recurrent osteomyelitis, was given 6 Gm. of sulfadiazine daily for nine days. He had an average intake of 4,000 cc. and an output of 2,000 cc. On the ninth day there appeared a stabbing pain in the left costovertebral angle radiating to the groin. Urinalysis showed only a decreased specific gravity. No oliguria, hematuria or crystals were reported. The peak level of sulfadiazine was 10 mg. per hundred cubic centimeters. The drug was stopped and an intake of 5,040 cc. with an output of 2,650 cc. was obtained. His pain disappeared in six hours. He was discharged on the thirteenth day with a normal concentrating power of the urine.

CASE 9.—G. K., a white boy aged 5 years, admitted to the hospital on March 19, 1942 with a foreign body and corneal ulcer of the right eye, was given sulfadiazine 4 Gm. daily for three days. The average fluid intake was 1,000 cc. and the output was 450 cc. The blood level on March 22 was 15 mg. per hundred cubic centimeters. On March 23, the fourth day, hematuria appeared and the urine was loaded with sulfadiazine crystals. The drug was stopped and fluids were forced to 3,000 cc. daily. The hematuria persisted for two days. The nonprotein nitrogen was 37 mg. per hundred cubic centimeters. The urine was clear on March 25.

CASE 10.—A. H., a Negro boy aged 2 months, admitted to the hospital on March 15, 1942 with spasmodic croup, received 3 Gm. of sulfadiazine daily beginning on March 14. The average daily fluid intake was 1,000 cc. The output could not be determined. On March 18 there were many crystals in the urine. On March 21 there were many crystals, hematuria and albuminuria. The next two days the urine became worse, and the drug was stopped on March 24, at which time the urine output was 303 cc. The urine was clear in twenty-four hours.

CASE 11.—E. M., a white woman aged 73, was admitted to the hospital on March 16, 1942 with a three weeks history of influenza and chronic cough and urinary incontinence for five days. An ulcerating vaginitis due to the staphylococcus was diagnosed. Sulfadiazine 5 Gm. was given the first twenty-four hours and then 4 Gm. daily. Sulfathiazole ointment 5 per cent was applied to the vagina. On the third day she had severe pain in the lower abdomen. The sulfadiazine was discontinued on the sixth day. Hematuria occurred on the eighth day, with a urinary output of only 870 cc. The following day, March 26, there was only 430 cc. of bloody urine. On March 29 the output was 1,350 cc., the urine still showing some blood. Urologic consultation was requested because of hematuria. On March 31 a cystoscopy showed orange colored crystals on the floor of the bladder, which, when analyzed, consisted of pure acetyl sulfadiazine. Pyelograms were normal. The patient was discharged on April 3.

COMMENT

Certain conclusions can be drawn from this group of cases. The most striking point is that sulfadiazine is just as toxic to kidneys as any of the other sulfonamides. The drug should not be used without careful daily check of the urinary sediment, and intake and output of fluids should be kept adequate. An output of at least 1,500 cc. should be maintained. Likewise the average daily dose ought to be no more than 4 Gm. There are certain conditions that tend to produce renal complications. They are as follows:

1. The sudden concentration of the drug, such as results from intravenous administration or large doses orally, may result in a rather rapid and dramatic anuria within thirty-six to forty-eight hours, as noted in case 2.

2. Dehydration with a low intake of fluids, even with an average dose of 4 Gm. a day, may give renal complications.

3. Defects of the urinary tract, such as partial obstruction, will allow the concentration of the drug with crystal and calculus formation. This was noted in a 4 months old baby with hydronephrosis and hydroureter with infection requiring nephrectomy. A section of the kidney showed the pelvis filled with crystals and calculi of sulfapyridine and sulfathiazole. Another example is patient 4, with hypertrophy of the prostate, whose bladder floor contained 2 Gm. of acetyl sulfadiazine.

TREATMENT

We feel that the following method of treatment will give good results in any type of sulfonamide renal complications:

1. Stop the drug immediately with the first sign of hematuria, renal colic or oliguria. We do not agree with those who contend that hematuria or crystals in the urine are not important as long as anuria does not develop.

2. Force fluids. However, a positive water balance of over 5,000 cc. should be avoided, since edema of the brain can occur with possible death, as has been reported.

3. If oliguria is present with a urinary output of 500 cc. or more, a delay of twelve to twenty-four hours before cystoscopy, with the hope that diuresis will relieve the situation, may be tried.

4. Cystoscopy and catheterization of the ureters should be done immediately when oliguria persists or anuria is present. Delay will only allow further accumulation of calculi. Kawaichi and Rogers,[1] in their summary of the literature, showed that 6 of the 29 patients died, and these had had conservative treatment. Likewise, in 1 of Lindner and Atcheson's 2 fatal cases conservative treatment had been employed.

5. The ureteral catheters are left indwelling for periods of twenty-four to forty-eight hours until the return flow of urine is clear. Even this will not remove all the calculi, and if further obstruction occurs there should be no hesitancy in doing another cystoscopy and ureteral catheterization. That these calculi may persist for years has been shown by Newman and Schlesser,[8] who removed a sulfapyridine stone two years later.

6. The kidneys should be irrigated with warm sodium bicarbonate solution of 2.5 per cent or warm isotonic solution of sodium chloride. We have at times alkalized the patient intravenously as well as orally.

7. Retrograde pyelograms should be made prior to withdrawal of the catheters.

CONCLUSION

1. In 11 cases in which renal complications appeared secondary to the administration of sulfadiazine there were no serious consequences, though the potentialities were present.

2. Analysis showed that complications usually appeared by the seventh day of drug administration. The average daily dose was 5.5 Gm. The average blood level was 11 mg. per hundred cubic centimeters. This would suggest a safe dose of 4 Gm. a day with a safe blood level of not over 8 mg. per hundred cubic centimeters.

3. We believe that sulfadiazine, being better tolerated by the stomach, is therefore a more dangerous drug to produce renal complications because physicians are more likely to be less vigilant.

1021 Second National Bank Building.

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PREGNANDIOL EXCRETION IN FEMALE PSEUDOHERMAPHRODITISM

(?CONGENITAL ADRENAL HYPERPLASIA): STUDIES IN TWO CASES

VALERIE E. GENITIS, M.D.
AND
I. P. BRONSTEIN, M.D.
CHICAGO

The end product of progesterone metabolism, pregnandiol, is determined as sodium pregnandiol glucuronidate by a gravimetric method developed by Venning and Browne.[1]

Estimations of this complex have been made by various investigators in normal and pathologic menstrual periods, in normal pregnancy, abortions, toxemias and, lastly, in cases of the adrenogenital syndrome.[2] Except in an isolated case (a child aged 3 years), there have been no data available among children.[3]

The accumulated literature to date has already been well summarized, but it may be well to recall a few pertinent facts regarding the excretion of pregnandiol. This compound is excreted in the urine during the luteal phase of the normal menstrual cycle when the corpus luteum is active and absent during the first half of the intermenstrual phase. The amount of pregnandiol determined for the whole cycle may vary from 34 to 54 mg., although the daily output may be 2 to 10 mg.[4]

During pregnancy the compound is excreted in increasing quantities in the urine as gestation proceeds, when its production is attributed to the placenta. The mean figure as given by Venning [5] is 75 mg. a day and by Cope [6] as 55 mg. daily, with wide variations. The presence of pregnandiol in association with amenorrhea is suggestive of pregnancy and is to some extent used as a diagnostic aid.[7] The absence or diminution of pregnandiol during pregnancy is indicative of a pathologic condition such as threatened abortion or death of the fetus.[8] There is some difference of opinion as to the metabolism of pregnandiol in toxemias of pregnancy and the role of the kidney in its excretion.[9] The metabolism of progesterone in the body has been adequately described by Hamblen,[10] Venning,[11] and Cope [6] and includes ovarian, hepatic, uterine and renal factors.

Our interest was stimulated by 2 cases of pseudohermaphroditism which we had occasion to study and in which pregnandiol titers were determined. We speculated as to the diagnostic value of pregnandiol in these cases, and, because of the paucity of data in the young age group, determinations on other children were made for comparison. These include a pubescent boy and girl, 2 girls with prolonged menstrual bleeding, a precocious pubescent child and a Lorain-Levi dwarf.[12] These are not included in this report.

The need for total and complete urine specimens was stressed by several groups, but recently Bachman [8] suggested that only a portion of the urine is necessary for analysis. He felt that the general trend of values gives enough information in certain conditions, especially in the last months of pregnancy.

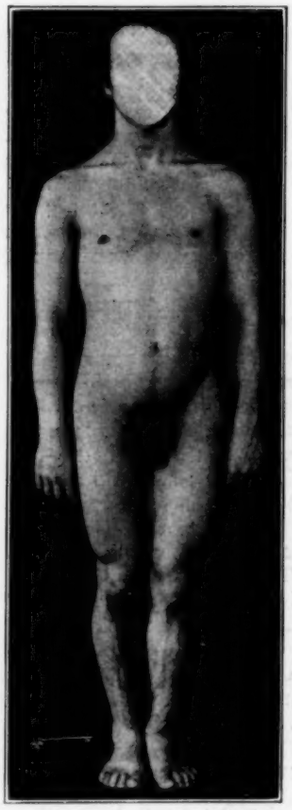

Fig. 1.—Appearance of patient 1, a pseudohermaphrodite aged 10 years.

We expected the amount of pregnandiol in the urines of children to be very small; therefore, in order that a sufficient yield of the compound could be obtained large pooled volumes of urine were extracted. In most instances the urines were pooled into forty-eight hour lots and the total volume was extracted. Sometimes with this procedure the final weighed precipitate was of no significance.

Pseudohermaphroditism is a syndrome applied in cases of virilism with an anomaly of the external genitalia present at birth; that is, an enlarged clitoris; a urethral opening just beneath the phallic structure, as in hypospadias; a vagina that usually opens into the urethra with no external orifice. Howard and Whitehill [13] aver that this congenital abnormality in a patient with ovaries as the gonads is found only in cases of adrenal cortical hyperplasia. They further state that these patients are of small stature. Young [14] described 4 female pseudohermaphrodites who presented the fol-

Based on a thesis submitted to the Pediatric Department in 1941 by Dr. Genitis for the M.S. degree.

Dr. J. H. Kiefer rendered aid in the visualization of the genital tract and Dr. B. O. Barnes in the assay for urinary 17-ketosteroids.

From the Department of Pediatrics (Endocrine Clinic), University of Illinois College of Medicine, and the Research and Educational Hospital.

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lowing identical conditions: (1) enlargement of the adrenals with hyperplasia of the androgenic zone of the cortex, (2) hypoplastic ovaries and (3) an enlarged clitoris and a persistent urogenital sinus into which the vagina opened. He was the first to examine the urogenital system with the cystoscope in this type of patient and perform successfully plastic surgery.

The pathologic condition of the adrenal gland in pseudohermaphroditism is controversial.[15] Grollman[16] originally attributed the pathologic condition to special "androgenic" tissue but recently postulated that the virilism was due to inclusion testicular rests in the adrenal cortex or to a derangement of steroid metabolism.

Venning, Weil and Browne[9] followed the course in 2 cases of the adrenogenital syndrome by the excretion of pregnandiol in the urine: A woman aged 29 with symptoms of virilism had a carcinoma of the adrenal cortex and excreted 12 mg. of pregnandiol daily for seven days. Corpus luteum was not found at autopsy. A woman aged 25 excreted 20 to 30 mg. daily for two weeks and showed an enlargement of the left adrenal gland. No further follow-up on the patients was reported. Finkler's[17] patient with this syndrome, a woman aged 25, excreted 21.9 mg. of pregnandiol for the first ten days and for the next four days an average of 29 mg. daily. Stover and Pratt[3] found no pregnandiol in the urine of a 3 year old child with the adrenogenital syndrome.

Fig. 2.—Perineum (patient 1), showing phallic structure.

REPORT OF CASES

We have studied 2 cases of pseudohermaphroditism in the past two years and extracted the urine for the pregnandiol complex.

CASE 1.—L. G., a 10 year old child (fig. 1) was referred because of cessation of growth in the last two years. This patient as well as patient 2 was thoroughly studied from the point of view of physical development (sexual and menstruation) and complete laboratory studies, including roentgenograms of the head (sella), wrist and knee, fundi and visual fields, basal metabolism, blood cholesterol and sugar tolerance in addition to roentgenographic cephalometric appraisal. Delivery was normal; a mass noted in the perineum at birth increased steadily in size. Pubic hair appeared at 3 years and the voice deepened at 5 years. Play and demeanor were masculine and the psychologic tests coincided with this observation. The child looked older than the chronological age; the voice was husky, the muscular development pronounced and masculine distribution of hair was noted.

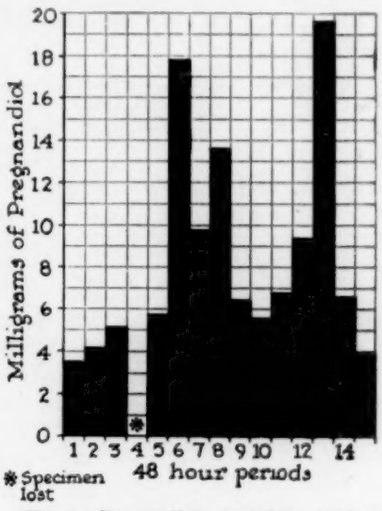

Fig. 3.—Pregnandiol excretion (patient 1) over a period of twenty-eight days.

Examination of the perineum (fig. 2) revealed a large phallic structure with an orifice at the base, which on probing and endoscopy demonstrated a urethra and a vagina. Testes and a scrotum, bifid or otherwise, were not demonstrable. Studies with iodized poppyseed oil confirmed our suspicions in outlining what seemed to be a vagina and a uterus. Retrograde pyelograms were negative. Roentgenograms of a wrist and knee gave evidence of premature epiphysial closure.

The urinary 17-ketosteroids were twice normal at the beginning of the study and a year later four times normal (30 and 69 mg. in twenty-four hours, respectively).[18] The urinary gonadotropic assay[19] was less than 66 mouse units per liter and the estrogenic assay negative. Pregnandiol was excreted in increased amounts ranging from 0.34 to 19.7 mg. in forty-eight hours (fig. 3). An exploratory laparotomy was advised and refused. At the insistence of the parents and because of their interpretation of the milieu as being masculine, they entered the child in a new school as a boy and the entire activity and association is now as a male. At a recent visit no regression of symptoms was noted, but both the parents and the child exhibited a happier frame of mind. Statural growth, as was expected, remained the same.

CASE 2.—P. M., a 4 year old child, was born as a girl, but the parents were told at the time of delivery that there was an enlargement of the clitoris. Her appearance was that of an 8 year old, with deep voice and pubic hair. An orifice was noted at the base of the enlarged clitoris. A bone age of 12 years was determined by roentgenograms of the wrists. Examination of the skull was negative for a sellar abnormality. A genitourinary examination by endoscopy and injection of iodized oil demonstrated a vagina and a cervix similar to those described in case 1. Vaginal smears showed no cornified epithelium.

The 17-ketosteroids were increased in amount (37 mg. in twenty-four hours). Gonadotropic assays were less than 66

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mouse units per liter of urine. Urinary estrogenic assays were negative. Pregnandiol determinations at various intervals showed an increase in several specimens, a 20 mg. yield in the one forty-eight hour analysis. Pregnandiol was not recovered in some of the other specimens.

Laparotomy was done and female organs were visualized and interpreted as showing no gross abnormality.[20] There was a suspicion that the right adrenal gland was slightly enlarged, but no tumor masses were palpated. A posterior approach at a later date is contemplated with the idea of resecting the adrenals.

The 2 cases are duplicates as regards description.

COMMENT

We determined the titer of pregnandiol in 2 pseudohermaphrodites. There are few figures for comparison, not only in this age group but in this syndrome, as most of the work has been done on adults with obstetric problems.

The pseudohermaphrodites excreted pregnandiol in varying amounts. In a study of adult patients with the adrenogenital syndrome higher titers were found, and it is possible that the compound increases in amount as the condition progresses. Stover and Pratt's 3 year old pseudohermaphrodite excreted no pregnandiol and our 4 year old child excreted irregular amounts. Perhaps the difference in amount is due to one of the other factors influencing the metabolism of this steroid compound. That the adrenal cortex may elaborate progesterone is possible, for there exists a close relationship in structure between progesterone, androgens, cholesterol and desoxycorticosterone. Further work is indicated for correlating endocrinopathies and pregnandiol excretion. The extraction of large amounts of urine in children is needed to obtain a sufficient yield of the compound. Perhaps studies made daily or at short intervals may reveal significant data if done over a long period of time. With adolescent problems, in lieu of other criteria of maturation, pregnandiol values may be used to indicate the general trend of ovarian function.

SUMMARY

Pregnandiol titers in pseudohermaphroditism are definitely elevated and suggest an adrenal factor.

More data are desirable in children before normal ovarian function at puberty can be gaged. Pregnandiol determinations may be made a basis for study of disturbances in this period and may be related to various endocrinopathies.

Since this paper was submitted, patient 2 had a partial adrenalectomy in March 1942 and microscopic section revealed a small adenoma. We have also studied a third pseudohermaphrodite, aged 15 years, whose internal organs were feminine. Partial adrenalectomy was performed and hyperplasia was found on microscopic study; suggestive changes appeared several months later. In the 15 year old patient we were able to obtain only one preoperative pregnandiol value of 36.2 mg. in twenty-four hours.

20. Sections of the ovaries, both right and left, showed increased density of the stroma surrounding the follicles. They seemed to have reached the stage of development of early puberty, and there was evidence of atresia of the follicles.

Intestinal Digestion.—The intestinal juice contains at least five enzymes: enterkinase, by the action of which trypsinogen is converted into trypsin; erepin, which produces further cleavage of the proteoses and peptones into amino acids; and the three enzymes sucrase (or invertase), maltase and lactase, which hydrolyze respectively the three disaccharides sucrose, maltose and lactose.—Sherman, Henry C.: Chemistry of Food and Nutrition, New York, Macmillan Company, 1941.

ACID FAST ORGANISMS IN SPUTUM WITH NORMAL OR QUESTIONABLE ROENTGENOGRAPHIC FINDINGS

FRANCIS B. TRUDEAU, M.D.
AND
ROBERT L. YEAGER, M.D.
TRUDEAU, N. Y.

A rather rare but often puzzling problem for physicians who deal primarily with abnormal conditions of the chest is the case in which tubercle bacilli are or have been reported found in the sputum and yet the x-ray films fail to show any definite parenchymal lesion. Are we to put our entire faith in the x-ray film and disregard the positive sputum, allowing the patient to continue a normal life, or are we to tell our patient that he has clinical tuberculosis which needs treatment, in spite of the negative or questionable roentgen ray finding?

In order to help us determine our course of procedure in this type of case, we went over the records of our patients at the Trudeau Sanatorium for the past thirty years and picked out all those of patients who had come to us either because they had been told by their physician that tubercle bacilli had been found in their sputum or because these organisms were found in our own laboratory while their roentgenograms taken at the sanatorium failed to show any definite pulmonary involvement. By following these patients each year after leaving the sanatorium, we believed that we should be in a position to evaluate more clearly the significance of these particular findings. As a coincidence we were able to find exactly 100 cases—an incidence of 1.5 per cent of admissions studied—which filled the aforementioned requirements, although in 6 of these the roentgenogram showed a slightly more than questionable lesion. The present report is based on these 100 cases.

The first point which we wished to clear up was whether the offending organisms were found previous to the patient's entering Trudeau Sanatorium or in our own laboratory. Our figures show that slightly over half of the patients, 55, came to us as a result of the positive sputum having been found in an outside laboratory, while in 37 instances the organisms were first demonstrated while the patients were under treatment with us. In only 8 cases were the previous positive findings confirmed in our own laboratory.

The next point which seemed of significance to us was the number of times that tubercle bacilli were found in the sputum in each case, as it would seem that the more often the bacilli were demonstrated in individual cases the more significant the finding would be in regard to the prognosis. A single positive finding was reported in 75 of the cases, while in 13 cases a positive report was obtained two to three times and in 12 cases the sputum showed organisms over three times. It is particularly interesting that of the last 12 patients the follow-up records show that 8 have reported themselves continually well for five, seven, seven, seven, nine, ten and thirty years, 2 had relapses but were well at the end of fourteen years, while 1 died of tuberculosis in the sixth year and 1 has not been heard of since discharge.

We then tried to bring out the significance of the Gaffky count in this series. Of course it must be remembered that many of these cases were studied long before this method was used and that most of the patients in whose sputum the organisms were found

before coming to us had no history of a Gaffky count. Our observations show that this was true for 57 of our patients, while of the 43 remaining patients for whom we have a report 13 had a Gaffky I and 25 a Gaffky II or III, while in 5 cases the count was over Gaffky III, a Gaffky VI being the highest recorded. In cases in which more than one count is reported, we have used only the highest one in each case. Again, in studying the follow-up records of our 5 patients with more serious conditions, those whose Gaffky count was over III, it is interesting to note that all of them are reported as well over a period of seven, seven, fifteen, fifteen and thirty years respectively.

For the past eighteen years, basing our belief on the statistical studies of Brown and Heise,[1] we have felt at Trudeau Sanatorium that in order to make a positive diagnosis of pulmonary tuberculosis number 4 or 5 of the following diagnostic criteria should be present or, in their absence, any two of the first three: (1) history of hemoptysis of a drachm (3.7 cc.) or more of blood, (2) history of simple wet pleurisy, (3) persistent moderately coarse rales in the upper third of the chest, (4) parenchymal changes shown in the roentgenograms and (5) tubercle bacilli in the sputum.

In this study criterion 5 was present in all cases and criterion 4, roentgenographic changes, was absent. Nine patients gave a history of hemoptysis of a drachm or more of blood, while many others had had streaked sputum. Eight gave a history of pleurisy with effusion. Eleven had rales in the upper third of the chest. Two patients had apical rales on physical examination, in addition to having had hemoptysis, while 3 had similar rales and an associated pleurisy with effusion. In 67 cases there was no history of hemoptysis or pleurisy and no rales were heard. In 33 cases there was, in addition to the reported positive sputum, at least one of the other cardinal symptoms, yet the roentgen study failed to confirm this rather definite diagnosis.

We were indeed most fortunate in following up this series of cases, for in only 1 were we unable to find at least one year's report. Forty of the cases were followed from one to ten years and 39 from eleven to twenty years, while in 21 we received word as to the physical condition for over twenty years. Our classification at the end of this time is as follows (table 1):

TABLE 1.—*Follow-Up Study from One to Thirty Years on the Hundred Patients Here Reported*

Years After Leaving Sanatorium	Well	Relapsed and Well	Alive	Relapsed and Chronic	Dead	No Report	Total
1 to 10	31	4	0	0	4	1	40
11 to 20	28	5	2	1	3	..	39
Over 20	18	3	0	0	0	..	2 1
	77	12	2	1	7	1	100

The patients under the heading of "well" are those who have been well or working, or at least able to do so, and have had negative sputum for at least two years. "Relapsed and well" refers to those patients who reported that they had had a relapse some time after leaving us but had recovered from this and at the time of their final report were well. "Alive" refers to those patients concerning whom we could find nothing relative to their physical condition except the fact that they were still living. "Relapsed and chronic" is self explanatory, as is the last classification, "dead." It will be noted that 77 of the 100 patients were "well" after having left the sanatorium from one to thirty years ago; 12 had relapses but again regained their health; 2 were reported as simply "alive," while only 1 came under the heading of "relapsed and chronic" at the time of the last report. Seven had died, while only 1 failed to send in a report.

TABLE 2.—*Cause of Death*

Patients	Cause	Years After Leaving Sanatorium
1	Tuberculosis	6
1	Unknown	9
1	Asthma	9
1	Suicide	11
2	Carcinoma of colon	4 and 12
1	Carcinoma of stomach	16

The cause of the 7 deaths (table 2) is indeed most interesting, especially since only 1 patient was reported as having died of pulmonary tuberculosis six years after leaving the sanatorium. One patient was reported as having died of "cause unknown" nine years after leaving us and after having sent in a report of "well" during the eight previous years. Although we cannot be certain, this does not sound like death due to tuberculosis. One patient died of asthma nine years after leaving the sanatorium; 1 committed suicide; the remaining 3 were of particular interest as having died of carcinoma of the intestinal tract, the colon being affected in 2 and the stomach in the remaining 1. Death occurred four, twelve and sixteen years respectively after leaving the sanatorium in these 3 cases. We are rather at a loss to explain this, and possibly it is merely a coincidence.

An examination of the histories of these patients reveals that 3 of them had been sent here with a diagnosis of renal tuberculosis and the positive sputum was found on routine examination. The remaining 97 all gave a history of such symptoms as streaking, chronic fatigue, continuous low grade fever, cough or expectoration, in the majority of instances over a period of many months before admission and for which medical advice had been sought. Their average length of stay in the sanatorium was four months. Their treatment was the usual hygienic dietetic regimen, practically all of them being ambulant throughout their stay. There was no collapse therapy done.

The question of the reliability of the reported findings of acid fast tubercle bacilli must be considered. It is possible that some of these represent laboratory errors. Others may be due to nonpathogenic acid fast bacilli. The number of cultures and guinea pig inoculations that were done in this series was too small to be statistically important, for 80 per cent of these patients were admitted before 1930, before which time cultures and guinea pig inoculations were not routinely done. The facts that all of these patients had symptoms suggesting chronic illness, that many had an associated pleurisy with effusion, hemoptysis or rales and that the number of reported relapses was similar to that expected from a minimal group suggest that the diagnosis in the majority of instances was valid.

1. Brown, L., and Heise, F. H.: The Value of the Trudeau Sanatorium's Five Diagnostic Criteria of Pulmonary Tuberculosis in Negative Diagnosis: Study of 264 Cases Admitted to the Sanatorium, Diagnosed as Nontuberculous and Followed Up from One to Seven Years, Am. Rev. Tuberc. **9**: 398 (July) 1924.

SUMMARY AND CONCLUSIONS

One hundred cases with reported positive sputum and negative or questionable roentgen ray findings were followed for one to thirty years after discharge.

In this series 12 patients had relapses during this time and there have been 7 deaths, only 1 of them being reported as due to pulmonary tuberculosis.

Although it is possible that in a small number of these cases the acid fast organisms found were nonpathogenic or due to a laboratory error, the very favorable prognostic significance of negative or doubtful roentgen ray findings in cases of suspected pulmonary tuberculosis, even though the sputum is reported as positive, seems to be clearly demonstrated.

Clinical Notes, Suggestions and New Instruments

CAVERNOUS SINUS THROMBOPHLEBITIS

CURE WITH SULFATHIAZOLE

GEORGE B. MOORE JR., M.D., Major, M. C., U. S. Army
JAMES D. GARDNER, M.D., Major, M. C., U. S. Army
KENNETH R. BELL, M.D., Captain, M. C., U. S. Army
AND
A. JACK TANNENBAUM, M.D., Captain, M. C., U. S. Army
CAMP CLAIBORNE, LOUISIANA

L. H., a nurse in the Army Nurse Corps, was admitted to the surgical service of the Station Hospital, Camp Claiborne, La., on Sept. 20, 1941 immediately after an automobile accident in which she sustained a severe laceration of the lower lip and the chin and fracture of both maxillas and palatine bones, which separated as a single unit from all bony attachments. There was a displacement of the maxillas 1 cm. posteriorly and superiorly, accompanied by severe hemorrhage of the posterior nasal and maxillary vessels, which was controlled by stabilization of the maxillas with an emergency dental and elastic tension splint in conjunction with an orthopedic plaster head cap.

The lacerations of the soft tissue were repaired and 1,500 units of tetanus antitoxin was administered. A roentgenogram on September 21 revealed a comminuted fracture of both nasal bones with fracture of the cartilage on the left side. Therapy at this point consisted in periodic intranasal instillation of 1 per cent ephedrine sulfate in saline solution. It was deemed unwise to consider any manipulations of the fractured nasal bones at this time because of the considerable amount of local swelling that was present and because of the danger of widening fracture lines already communicating with the base of the skull.

The patient's temperature ranged within 1 degree of normal until September 28, when there was a sudden elevation to 105 F.; the pulse rate was 120 and regular, the respiratory rate 30 per minute and the blood pressure 128 systolic and 64 diastolic. She soon became irrational. Six Gm. of sulfapyridine sodium in 150 cc. of sterile distilled water was administered by vein and followed with 1,000 cc. of 5 per cent dextrose in saline solution. The pulse was of poor volume and weak but regular. Within six hours the temperature dropped to 101 F., the patient's condition generally appeared much improved, and she had cleared mentally by the morning of September 30. Since the initial intravenous dose of 6 Gm. of sulfapyridine sodium she continued with the drug, taking 1 Gm. of sulfapyridine orally every four hours.

On the morning of September 30 physical examination revealed that the right palpebral fissure was narrower than the left because of ptosis of the right upper eyelid. The right pupil was irregular and smaller than the left. The fundi were of normal color and appearance, and there was no edema. A coarse estimation of the visual fields revealed no defect. The abdominal reflexes were absent bilaterally. The left knee jerk was hyperactive, and a positive Babinski reflex was elicited on the right. The neck appeared to be moderately stiffened, and Kernig's sign was present. There was an impairment of extraocular movements on the right indicating involvement of the third, fourth and sixth cranial nerves. A lumbar puncture was done, and 4 cc. of cloudy fluid under slightly increased pressure was removed, with a count of 450 polymorphonuclear cells.

At this point it was believed that we were dealing either with meningitis or with an early brain abscess of the middle brain fossa on the right side or a combination of the two. On October 1 the patient appeared generally improved, but there were severe edema and ptosis of the right eyelid. The results of the remainder of the neurologic examination were unchanged. On October 2 the ptosis of the right eyelid was extreme. There was considerable proptosis of the bulb with definite fixation. There was considerable swelling surrounding the right orbit and extending into the right temporal region. No tenderness could be elicited on pressure on the eyeball, and extraocular tension was increased. The conjunctiva protruded with edema. The pupil, still small and irregular, barely reacted to light. Ophthalmoscopic examination revealed considerable distention of the central retinal vein of the right eye. Extraocular movements continued to be impaired. The neck continued stiff and painful, and the Kernig and Brudzinski signs were present. The left knee jerk continued hyperactive. At this time it was believed that the patient had a definite cavernous sinus thrombosis on the right.

On October 5 a culture of blood taken on September 29 was reported to have grown Staphylococcus aureus. Sulfapyridine therapy was discontinued and sodium sulfathiazole administered by vein in doses of 3 Gm. in sterile distilled water every six hours, until a level in the blood of 4 mg. per hundred cubic centimeters was obtained. Then a dose of 1 Gm. of sulfathiazole was given orally every four hours. The rectal temperature continued between 101 and 103 F. The general condition of the patient was fair. Considerable moist and crepitant rales became manifest throughout the chest. There was a moderate cough with profuse expectoration of purulent sputum which had no particular odor. Examination of the sputum revealed a short chain streptococcus to be the predominating organism with considerable blood and pus. No fusiform spirochetal organisms could be found. A roentgenogram of the chest (fig. 1) revealed four pulmonary abscesses each approximately the size of a 50 cent piece (30 mm.). Two were located in the lower lobe of the left lung and two in the midcentral portion of the right pulmonic field. The dose of sulfathiazole was increased to 2 Gm. every four hours, and further symptomatic therapy continued to include daily blood transfusions ranging from 100 to 250 cc. each with sufficient dextrose and saline solution given by vein to maintain proper food intake. In addition, together with vitamin preparations, considerable liquid proteins were administered through a nasal tube in order to balance the diet. A culture of the blood which was taken on October 7 was reported positive on October 19 for Staphylococcus aureus.

On October 21 the patient experienced a sudden loss of consciousness, accompanied by a typical jacksonian seizure beginning with clonic twitchings of the right side of the mouth and then spreading to include the entire right side of the face. Her head turned jerkingly to the right. This was followed by atonic convulsion of the left arm, forearm, wrist and hand and of the left leg. These movements quickly spread to become a generalized seizure. This syndrome recurred three times within fifteen minutes, following the initial seizure.

From the Station Hospital.
Dr. Bell died on Dec. 4, 1941.
Valuable consultation was rendered in this case by Capt. Leon Ferber, Chief of Neuropsychiatric Section, and Capt. Paul A. L. Black of the Ear, Nose and Throat Clinic, Station Hospital, Camp Claiborne, Louisiana.

Sodium amytal was administered intravenously for control of the episode. On awakening from the action of the drug, she continued in a highly restless state with frequent aimless motions of the arms. It was believed at this time that the patient's clinical signs and symptoms were the result of a cerebral embolus or of an abscess located in the right motor area.

All the former external signs of cavernous sinus thrombosis had gradually begun to disappear by this time. The proptosis and edema about the right eye had receded. However, on October 23 the patient suddenly showed a red papular eruption over the elbows, knees, arms and legs. The lesions were warm and centrally spotted and were surrounded by a purplish coloration which faded off into the normal surrounding tissue. Initially they measured about ¼ inch (0.6 cm.) in diameter and gradually increased in size, in some instances to ½ inch (1.2 cm.) in diameter. This was believed to be an integral part of the embolic shower the etiologic reservoir of which was in the pulmonary abscesses. At the same time there developed severe gross hematuria believed to have originated in the embolic shower. The blood urea nitrogen content was 16.8 mg. per hundred cubic centimeters and the creatinine content 2 mg. per hundred cubic centimeters.

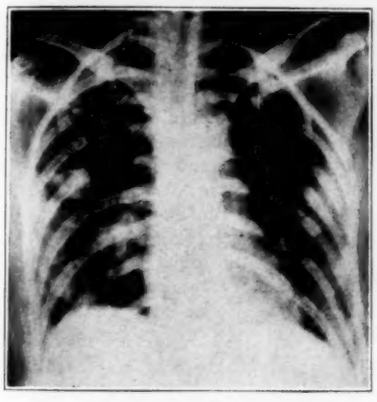

Fig. 1.—Four pulmonary abscesses.

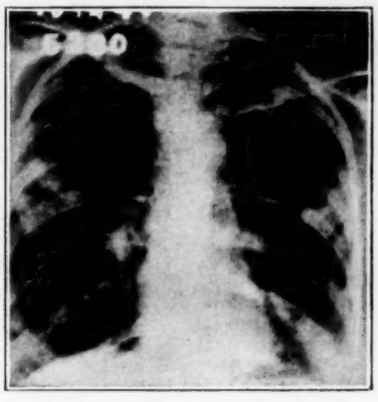

Fig. 2.—Improvement of the pulmonary abscesses can be noted.

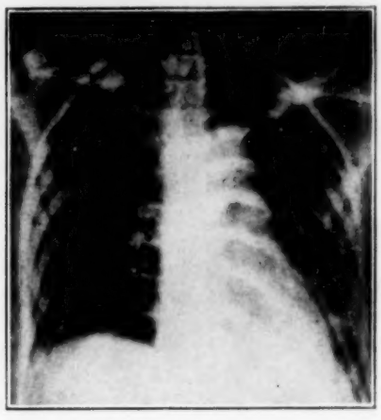

Fig. 3.—The abscesses are completely healed.

This state existed for one week. The patient remained comatose or semicomatose. The embolic cutaneous lesions gradually lost their reddish hue and tapered off into a purplish coloration. On October 31 it was apparent that there was extensive paresis of the left arm and left leg. All evidence of the previously existing cavernous sinus thrombosis had disappeared. However, after the sudden onset of gross hematuria, which lasted for two days, there was a gradual decline in the urinary blood until it was apparent only microscopically. A gradually increasing pitting edema was becoming more apparent every hour until after forty-eight hours a state of mild to moderate anasarca existed. In addition there appeared severe tympanites, but there was no evident melena. A culture of the urine at this time was positive for Staphylococcus aureus.

During this episode the concentration of sulfathiazole in the blood was maintained at 25 to 33 mg. per hundred cubic centimeters for six days. Cultures of blood taken subsequently were reported negative for any growth. After the maintenance of this high level for six days the drug was withdrawn. Roentgen examination of the lungs revealed that the pulmonary abscesses were healing (fig. 2). Multiple small transfusions of whole blood were administered, and all foods liberating the sodium ion were eliminated from the diet. Two days after elimination of the drug the sensorium had cleared completely. The generalized edema was disappearing, and the formerly affected right eye became perfectly normal. A roentgenogram of the chest at this time revealed complete healing of all four pulmonary abscesses (fig. 3). Except for severe muscular wasting the patient appeared her normal self again, having regained complete function in the left arm and leg. As a precaution against any latent residual infection, medication with sulfathiazole, in a dose of 1 Gm. three times a day, was continued for three months from the date on which chemotherapy was instituted.

COMMENT

Early in the second week of convalescence our patient presented Eagleton's [1] six diagnostic signs used as criteria of cavernous sinus thrombosis: (1) fracture of both maxillas with infection, (2) S. aureus infection of the blood stream, (3) venous congestion with thrombosis of the central vein of the right retina, (4) paralysis of the third, fourth and sixth cranial nerves on the right, (5) periorbital cellulitis involving the temporal region and (6) subsequent development of pulmonary abscesses. Recognizing our predicament, we were fully aware of Schall's [2] success in using heparin with chemotherapy and of Bancroft's [3] advice along the same line. Nevertheless, having seen the brains which Mallory demonstrated at the Massachusetts General Hospital, showing the vast cerebral hemorrhages following the administration of heparin, and remembering his and Libman's opinion with regard to the use of heparin, we proceeded as we had been, placing all confidence in chemotherapy. Since the organism recovered from the blood was Staphlococcus aureus we used sulfathiazole. Our initial attempt to build up a high concentration of the drug in the blood necessitated our giving it intravenously 6 Gm. at a time and then continuing administration of the drug through a Levin tube directly into the small bowel. Initially we used sulfapyridine (as did Lyons [4]), not knowing at the time the particular organism with which we were dealing. Because of the sudden violent clinical manifestations we believed the cause of infection to be a streptococcus. However, as soon as Staphylococcus aureus was identified a change was made to sulfathiazole. During the early stage of the illness there evidently were infected emboli traveling the venous pathway only to localize in the lungs, resulting in four pulmonary abscesses, as noted on roentgen examination. However, our efforts at establishing an extremely high concentration of sulfathiazole in the blood prevailed, and concentrations ranging from 25 to 33 mg. per hundred cubic centimeters were maintained for six days during the most critical stage of the illness. We feel that this prolonged high concentration of sulfathiazole in the blood stream was imperative. Many factors, all of which were discouraging, seemed to follow one after the other, as one might expect from a patient refusing to die early in cavern-

1. Eagleton, W. P.: Cavernous Sinus Thrombophlebitis, New York, Macmillan Company, 1916.

2. Schall, L. A.: Treatment of Septic Thrombophlebitis of the Cavernous Sinus, J. A. M. A. **117**: 581 (Aug. 23) 1941.

3. Bancroft, F. W.: Use of Anticoagulants in Cases of Postoperative Thrombosis and Embolism, Arch. Otolaryng. **32**: 934 (Nov.) 1940.

4. Lyons, Champ: The Treatment of Staphylococcus Cavernous Sinus Thrombophlebitis with Heparin and Chemotherapy, Ann. Surg. **113**: 113 (Jan.) 1941.

ous sinus thrombosis. After the appearance of the lung abscesses, arterial embolism developed to a considerable degree. Emboli were scattered over both the upper and lower extremities, and finally there ensued convulsive seizures, jacksonian in character, with a left hemiparesis and prolonged unconsciousness for thirteen days, during which severe gross hematuria occurred which lasted two days.

The various arguments present themselves at this point. Was this unconscious state the result of single or multiple infected cerebral emboli, or was the extremely high concentration of sulfathiazole in the blood producing cerebral edema? If the latter, then how could one explain the left hemiparesis and facial weakness? We are therefore inclined to feel that our patient perhaps did have multiple small cerebral abscesses which yielded to treatment and healed, just as we know that the pulmonary abscesses healed as a direct result of the maintenance of sulfathiazole in a high concentration in the blood stream.

The gross hematuria we attribute to renal infarction during which the patient lost considerable amounts of protein, the albumin-globulin ratio being reversed to such an extent that anasarca developed. No evidence for a nephrotic state could be detected, and we are therefore of the belief that the anasarca was purely the result of hypoproteinemia. From the onset of this state she was given considerable amounts of protein through a nasal tube, multiple small daily blood transfusions, intravenous injections of calcium and milk by mouth to replace the calcium lost with the albumin. Lastly, all food liberating the sodium ion was removed from the diet. Within four days there was a reversal of the tissue fluid balance, after which the convalescence was rapid and uneventful.

CONCLUSION

In a case of cavernous sinus thrombophlebitis the maintenance of a sustained concentration of sulfathiazole in the blood of 25 to 33 mg. per hundred cubic centimeters resulted in a complete cure even after pulmonary abscesses and arterial embolism ensued.

ADDENDUM

The following is a final note by Henry W. Brosin, Captain, M. C., Chief of Neuropsychiatric Section, LaGarde General Hospital, New Orleans:

On superficial examination the patient was an alert, fairly well oriented, mildly cooperative, unmarried white woman aged 34, who looked much older. She was tense, anxious, restless, picking at her face and fingers, moving her body quickly from one position to another, apparently anxious to escape the examination situation. She attempted to put up a good front with an offhand manner suggestive at times of an empty euphoria. She attempted shallow humor to shield her underlying apathy and depression. Strong effort was made to deny the existence of all organic injury or residuals with the claim that she could do full duty if only the doctors would cure her headache and frequency, urgency and dysuria. She boasted of her ability to prescribe for herself, insisting that no doctor understood her as well as she understood herself. After some weeks she claimed to be able to control the headache by the use of ephedrine nose drops and gargles. In speaking of her urinary difficulties she became frankly vulgar in her attacks on the physicians' inability to help her, a state of mind which was in sharp contrast to the primness which characterized her behavior before the accident. Visiting nurses who knew her before the accident were explicit in their description that she was now an entirely different woman because of her restlessness, use of vulgarity, aggressiveness, irritability and unreasonableness. There was an inappropriate affect noted in this patient when she spoke about her mother and other intimates. Her recent and remote memory were apparently fair, but careful examination elicited difficulties in both spheres. The content was that of regression in a neurotic adult. The sensorium was clear but suggestive of the deterioration due to organic damage to the cortex in her decreased ability to do problems and comprehend abstractions.

It was the opinion of this staff that the patient showed frank evidence of organic deterioration of the cerebral cortex.

PRESERVATION OF PROTHROMBIN IN DRIED PLASMA

MAX M. STRUMIA, M.D., BRYN MAWR, PA.

Loss of prothrombin in plasma dried from the frozen state and restored with sterile distilled water has been previously pointed out.[1] It has been suggested that prothrombin may be lost in the process of drying because of the loss of carbon dioxide, with resultant increased alkalinity of the plasma when it is restored with distilled water. Whereas the p_H of fresh citrated plasma varies between 7.4 and 7.7, the alkalinity of plasma restored with distilled water from the dried state varies from a p_H of 8.2 to 9.3. My associates and I found that the preservation of prothrombin is good up to a p_H of 7.7 and very poor with a p_H of 8.2 and higher. Thus the average content of prothrombin of plasma regenerated from the dried state with distilled water is from 15 to 20 per cent of normal.

If the regeneration is accomplished with cold distilled water saturated with carbon dioxide, the prothrombin in the resulting plasma solution averages between 50 and 60 per cent of normal when the original content was up to 80 per cent of normal. This method, however, is not convenient for practical use.

We have found it difficult to buffer the sodium citrate solution used for the collection of blood but have found that the use of a diluted solution of citric acid in place of distilled water for the regeneration offers a practical solution to the maintenance of a lower p_H and the preservation of prothrombin in the dried plasma. The following experiment is typical: Plasma from pool 113-A, separated from citrated blood two days after collection, showed in the fresh liquid specimen a p_H of 7.4 and a prothrombin content which in several determinations varied from 65 to 70 per cent of normal. Lot *a* (300 cc.) was dried from the frozen state to a residual moisture of 0.8 per cent in less than seventy-two hours. Lot *b* was similarly dried, and the residual moisture was 0.7 per cent. Both specimens were contained in standard 400 cc. bottles.[2] Lot *a* was regenerated with 250 cc. of distilled water. Complete solution occurred in eighty-two seconds, including the time consumed by the introduction of the distilled water. The resulting solution had a turbidity of 280 (nephelometric reading with photoelectric colorimeter with filter 66), a p_H of 8.5 and a prothrombin content of 20 per cent of normal. Specimen *c* was regenerated with 250 cc. of 0.1 per cent citric acid solution. It was completely dissolved in seventy seconds, including the time taken for the introduction of the solution of citric acid, and had a turbidity of 300, a p_H of 7.85 and a prothrombin content of 67 per cent of normal (average of several determinations). The citric acid solution was sterilized at 120 C. in the steam sterilizer for fifteen minutes in lots of 250 cc. contained in the standard 400 cc. bottle.

The intravenous administration to patients of dried plasma regenerated with 0.1 per cent citric acid solution has not given rise to reactions.

CONCLUSIONS

Excessive alkalinity of plasma regenerated from the dried state can be avoided and a good prothrombin content maintained by regeneration with 0.1 per cent citric acid solution instead of the customary distilled water.

From the Bryn Mawr Hospital.

1. Flosdorf, E. W., and Mudd, Stuart: The Procedure and Apparatus for Preservation in the Lyophile Form of Serum and Other Biological Substances, J. Immunol. **20**: 389 (Nov.) 1935. Strumia, M. M., and McGraw, J. J.: Blood Plasma: Its Place in the Practice of Medicine, with Special Consideration to the Problems of Preservation, J. A. M. A. **118**: 427-429 (Feb. 7) 1942.

2. Strumia, M. M.; Newhouser, L. R.; Kendrick, D. B., and McGraw, J. J.: Development of Equipment for Administration of Dried Plasma in the Armed Forces, War Med. **2**: 102-113 (Jan.) 1942.

Council on Physical Therapy

THE COUNCIL ON PHYSICAL THERAPY HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORTS. H. A. CARTER, Secretary.

DRINKER-COLLINS DUPLEX RESPIRATOR ACCEPTABLE

Manufacturer: Warren E. Collins, Inc., 555 Huntington Avenue, Boston.

A report entitled "Drinker-Collins Adult Respirator Acceptable" appeared in THE JOURNAL Feb. 17, 1941. The Drinker-Collins Duplex Respirator is said by the manufacturer to be essentially the same as the respirator described in that report except that provisions have been made for the respirator to accommodate either two children or one adult. The only change made in the respirator is the addition of three more arm ports.

The extra arm port at the foot end of the respirator is large enough to permit a child's head to pass through, and then a head rest may be attached giving accommodation for a second child. The cot is arranged in such a way that each child has its own section quite independent of the other.

Drinker-Collins Duplex Respirator.

When used for an adult, the extra arm ports give greater accessibility to the patient, especially in the vicinity of the feet.

The capacities of the Duplex Model are limited because the chamber measures only 72 inches from one end to the other (head rest excluded). If two children, each measuring 3 feet from shoulders to feet, occupied the respirator their feet would touch. Since their heads are outside, it is obvious that the apparatus will accommodate two children each 4 feet tall. In an emergency, even larger children might be accommodated with the feet overlapping side by side.

Clinical experience has proved that a group of children do not require individual respiration rates and amplitudes and may be placed in an apparatus accommodating as many as four children.

The Council voted to include the Drinker-Collins Duplex Respirator on its list of accepted devices.

HEIDBRINK ADULT RESUSCITATOR, KREISELMAN MODEL 51-A, ACCEPTABLE

Manufacturer: The Ohio Chemical & Mfg. Company, 1177 Marquette Street, Cleveland.

The Heidbrink Adult Resuscitator, Kreiselman Model 51-A, is designed for the administration of artificial respiration with oxygen to patients whose spontaneous respirations have not been resumed. Essential parts of the apparatus are an automat which regulates the amount of positive pressure exerted at the inhaler, a flowmeter calibrated for oxygen and 80-20 per cent helium-oxygen mixture, a flowmeter control valve, resuscitation inhaler and tubing, and continuous flow inhaler and tubing. The unit is mounted on an upright stand equipped with four swivel casters; a handwheel wrench and tool box are included. Motor and switches are of explosion proof design. The aspirator is electrically operated. The shipping weight is 100 pounds.

Only positive pressure is provided by the apparatus; there is no negative pressure developed at the face piece. For resuscitation, the automat is adjusted to deliver the selected positive pressure considered safe for the type, size and age of the patient being treated. Resuscitation is manually controlled. Following are instructions quoted from the firm's instruction booklet:

"The patient should be placed face up in a 15 degree Trendelenburg position with the head slightly hyperextended. Set the indicator on the automat at 15 mm. Hg. Place the resuscitation inhaler tightly on the patient's face so as to cover the nose and mouth completely, and depress the lever on the inhaler, holding it so for several seconds, i. e., long enough for the lungs to be inflated plus a second or two to permit the oxygen to be absorbed. Then release the lever for a few seconds, and repeat these cyclic periods at the rate of ten to twelve per minute until there is inspirational effort. The inflations should be made to coincide with the patient's inspiration."

The aspirator provided with the device is located on the end of the tool box. Vacuum is controlled by the thumbscrew adjacent to the vacuum gage on the pump. A cylindric metal cup attached to the left side of the pump catches any drippings of oil from the pump.

In the Council's investigation it was found that the masks provided will fit most faces satisfactorily and are of good construction; the apparatus may also be attached to an endotracheal tube. The pressures delivered conform within a reasonable degree of accuracy to those indicated on the automatic regulator.

The apparatus appears substantially and sensibly constructed and should be durable. However, an important consideration is whether the automatic regulator will remain accurate throughout long usage. Any considerable divergence in the upward direction from the stated pressures could result in serious damage to the lungs. The pressures should be checked against an accurate manometer from time to time, especially after it has been used over a period of years.

The Council on Physical Therapy voted to accept the Heidbrink Adult Resuscitator, Kreiselman Model 51-A, for inclusion on its list of accepted devices.

Council on Foods and Nutrition

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT. FRANKLIN C. BING, Secretary.

FATS AND OIL AND THEIR PRODUCTS (*See* Accepted Foods, 1939, p. 30).

Interstate Cotton Oil Refining Company, Sherman, Texas.

MEADOLAKE MARGARINE FORTIFIED WITH VITAMIN A, containing cottonseed oil, cultured skimmed milk, sodium chloride, a small amount of lecithin or sodium monostearosulfoacetate as an emulsifying agent, and vitamin A concentrate from fish liver oil.

Analysis (submitted by manufacturer).—Moisture 15.1%, total solids 84.9%, ash and sodium chloride 3.0%, sodium chloride 2.8%, fat 80.2%, protein (N × 6.38) 0.9%, lactose 0.8%, lactic acid 0.1%, melting point of fat 95 to 97 Fahrenheit.

Calories.—7.6 per gram; 218 per ounce.

Vitamins.—Protocols of vitamin assay submitted by the company indicate that the product contains not less than 9,000 international units of vitamin A per pound, derived from fish liver oil.

MILK AND MILK PRODUCTS OTHER THAN BUTTER (*See* Accepted Foods, 1939, p. 230).

There recently have been developed methods of processing cream so that it remains sweet for comparatively long periods of time if properly refrigerated. Not only are these canned products heat processed, but there also is added a small amount of stabilizing agents from plant sources. These creams are particularly useful in localities and under circumstances where fresh cream is not available. The following products stand accepted:

Avoset, Inc., San Francisco (distributor)

AVOSET—LIGHT, a canned stabilized cream of 20 per cent butterfat content with 0.3 per cent edible vegetable stabilizers (Avenex of the Quaker Oats Company (prepared from corn flour) and Cocoloid (Sodium Alginate) of the Kelco Company, Los Angeles) and less than 0.08 per cent salt.

Analysis (submitted by manufacturer).—Moisture 72.2%, total solids 27.8%, ash 0.7%, fat 20.1%, proteins (N × 6.38) 2.9%, carbohydrates (by difference) 4.1%.

AVOSET—WHIPPING, a canned, stabilized cream of 30 per cent butterfat content, with 0.4 per cent edible vegetable stabilizers and salt (less than 0.08 per cent.

Analysis (submitted by manufacturer).—Moisture 62.8%, total solids 37.7%, ash 0.6%, fat 30.1%, proteins (N × 6.38) 3.2%, carbohydrates (by difference) 3.8%.

UNCLASSIFIED AND MISCELLANEOUS FOODS (*See* Accepted Foods, 1939, p. 351)

The Colonial Salt Company, Akron, Ohio.

COLONIAL BRAND IODIZED TABLE SALT.

Analysis (submitted by manufacturer).—Sodium chloride 99.20%, potassium iodide 0.01%, water insoluble 0.484%, magnesium carbonate 0.49%, calcium sulfate 0.18%.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, JUNE 27, 1942

PROCUREMENT OF PHYSICIANS FOR THE ARMED FORCES

Elsewhere in this issue appears a statement by Mr. Paul V. McNutt, chairman of the War Manpower Commission, under which the Procurement and Assignment Service for Physicians, Dentists and Veterinarians functions, relative to the urgent need for physicians for the armed forces at this time. Mr. McNutt recognizes the indispensable character of the physician for both military and civilian needs. He makes clear that eight states—New York, Illinois, California, Pennsylvania, Massachusetts, New Jersey, Michigan and Ohio—must supply most of the physicians needed for the armed forces at this time. Some of the states have already supplied so many physicians in proportion to their total medical population that recruitment in those states is to be discontinued now or in the near future.

The medical profession cannot be accused of failure to play its part in any way in relationship to the war effort. Every one who is participating in the recruitment of physicians recognizes that there have been what are now called innumerable "bottle necks" to be cleared away from time to time as the effort has progressed. More than one hundred and thirty thousand physicians have already returned the registration blanks sent out by the National Roster of Scientific and Technical Personnel. These replies have been coded, and punch cards have been made for them. Any physician who has failed to receive an enrolment form from the National Roster should write at once to the National Roster of Scientific and Technical Personnel, in care of War Manpower Commission, 916 G Street Northwest, Washington, D. C., requesting that an enrolment form be sent to him.

Shortly there will be sent to every physician who indicated that service in the United States Army Medical Department would be his first choice or his second choice a letter as follows:

WAR MANPOWER COMMISSION

Procurement and Assignment Service
Washington

Procurement and Assignment Service for Physicians, Dentists and Veterinarians

Dear Doctor

You have indicated your willingness to serve the Nation in this great emergency. The Procurement and Assignment Service of the War Manpower Commission now calls on you to enter the Service. Please apply at once for a commission. You have been selected from among the available physicians in your community by a process that is believed to be fair and impartial.

Complete and mail the enclosed post cards immediately. The Office of the Surgeon General or his representative will provide the necessary application forms and authorize the time and the place for your physical examination.

Do not take any definite action regarding your practice until you receive specific instructions from the War Department. Each physician who is commissioned is routinely allowed fourteen days to wind up his affairs after receipt of orders from the War Department.

The rapidity of recruitment now in effect makes this communication necessary and requires your full cooperation. Please do not delay.

Sincerely yours,
FRANK H. LAHEY, M.D.
Chairman, Directing Board
Procurement and Assignment Service

Enclosures
No. 92 6/22/42

With this letter will be enclosed two postal cards, which will secure prompt action in relationship to the receipt of application forms and proper notification of the action taken in the responsible agencies in Washington.

The needs of the armed forces for physicians are immediate; unquestionably those needs will be met. Physicians who are under 37 years of age and who have been classified by the Selective Service are susceptible to restudy of their situation and reclassification as these needs become more and more urgent. The medical schools, hospitals, public health departments, industrial concerns, in fact every agency utilizing the services of physicians, must cooperate by restudying the men classified as essential, so that only those who are actually essential in the most restricted sense of that word will be retained. All others must be made available as needed for the service of the nation in the armed forces.

The Procurement and Assignment Service for Physicians, Dentists and Veterinarians was established to aid in the proper assignment of physicians in times like these to the tasks for which they are best fitted. Already this agency has been of immense value in the principles that have been adopted relative to the maintenance of medical education, hospital service and civilian health, as well as the study and evaluation of men for the Army and Navy medical departments. As the needs become more acute and the number of men available

less, their task assumes increasing importance. The War Manpower Commission is now the agency under which the Procurement and Assignment Service functions. Through the activities of various subcommittees such problems as maintenance of essential staff members for hospitals, the determination of adequate medical service for the civilian population needs, of adequate personnel for urban, county, state and national health departments and the needs of industry are being given special consideration. The medical profession, as Mr. McNutt has repeatedly emphasized, has in these activities shown the way to scientific study and allocation of manpower in this emergency.

SOME PROBLEMS OF WARTIME NEUROLOGY

In the total war in which we are now engaged, to quote Dr. Wilder Penfield,[1] "one civilian population is brought face to face with another civilian population in a war of labor, of self denial and of wits." In this situation academic abstraction must give place to pragmatic efforts toward the solution of present day tasks. What can neurology contribute? Speaking before the Medical Research Committee of the National Research Council at Ottawa, Dr. Penfield enumerated some of the problems which demand solution and which come within the province of the neurologist, the neurosurgeon and the psychiatrist. These include (1) methods of selection of military personnel, including intelligence tests, aptitude tests and personality studies, (2) the making of morale among men in service and among the families left behind, (3) prevention and relief of fatigue, (4) prevention and cure of psychoneuroses, (5) effects of blast on the nervous system, (6) nerve suture and nerve regeneration, (7) analeptic substances, (8) immersion foot and vascular occlusion, (9) prevention of adhesions about the brain and nerves, (10) treatment of cerebral and meningeal infections, (11) the treatment of craniofacial injuries, (12) the transportation and treatment of patients with spinal fractures and dislocations, (13) post-traumatic headache, (14) post-traumatic epilepsy, (15) post-traumatic circulatory instability, (16) pain in the lower part of the back, (17) treatment of the paralyzed bladder and (18) treatment of infections of the nervous system.

The list that has been cited may well occupy all the energies of the best minds in the fields of experimental and clinical neurology and psychiatry. The significance of these problems for the war effort may be glimpsed from a consideration of our experiences in World War I with just one of these, namely the war neuroses. According to the "Official History of World War I," an analysis of 1,043,653 British soldiers showed that neuroses made up from 34 to 40 per thousand of casualties evacuated home. In the American Expeditionary Force the total number of admissions of enlisted men suffering from functional nervous disease during the period from April 1917 to December 1919 was 9.5 per thousand, or 32,983 men. In England in 1921 pensions were being given to 65,000 for functional nervous disease exclusive of some 35,000 persons receiving pensions for what was then called "effort syndrome" and is now known as neurocirculatory asthenia. The Report of the Administration of Veterans Affairs for 1940 reveals that 58 per cent of all patients being cared for in Veterans hospitals have neuropsychiatric disabilities.

In the present war the civilian population is also exposed to war hazards, so that the incidence of neuroses in individuals exposed may increase and group reactions may occur. An offset to this rather gloomy prospect of wholesale invalidism and social waste is the encouraging thought that the significant progress made in the elucidation of the nature of the neuroses with consequent improvement in therapeutic technics will go far toward amelioration of this problem. Commenting on the fact that few nervous breakdowns have occurred in England in spite of suffering and material loss, Langdon-Brown [2] points out that participation as a member of a community serves as the best antidote for that distressing form of fear—the fear of being frightened. Cooperative action becomes the means of preserving mental health.

The great strides made in neurosurgery within the past two decades and the development of sulfonamide therapy will contribute much toward the improvement in the results of treatment of brain and nerve injuries.

1. Penfield, Wilder: Some Problems of Wartime Neurology, Arch. Neurol. & Psychiat. **47**: 839 (May) 1942.

2. Langdon-Brown, Walter: Mental Health, Nature **147**: 193 (Feb. 13) 1941.

Current Comment

FOOD AND DRUG ADMINISTRATION WARNS ON PHENOL-CAMPHOR MIXTURE

THE JOURNAL has warned against the promiscuous and unsupervised use of equal parts of phenol and camphor in the treatment of "athlete's foot." Under date of May 29, the Food and Drug Administration issued a Federal Drug and Cosmetic Act trade correspondence letter warning that in its opinion a mixture of equal parts of phenol and camphor is capable of producing necrosis and is too dangerous for indiscriminate use. Its sale should therefore be limited to prescriptions. Further, it warned that if this preparation is sold in interstate commerce the labels, to comply with the requirements of section 502(f)(2) of the Federal Food, Drug and Cosmetic Act, should bear warnings "to the effect that the article should not be applied to damp skin or over extensive areas; should not be applied under a bandage; and that if after use the skin turns white or is otherwise discolored, use of the preparation should be discontinued immediately

unless the physician directs otherwise." Since interstate shipments of this preparation are subject to the Federal Caustic Poison Act, not only should the label contain the name of the caustic substance, but the word "Poison" must be stated on the label together with directions for treatment in case of accidental personal injury.

COLOR FILMS IN FIRST AID TRAINING

Humble and Mearns [1] describe what appears to be a novel and interesting method of illustrating first aid treatment of wounds—by color films. To attain realism they resorted to simulating wounds. Brachial or femoral hemorrhage was produced for example by means of a small syringe, rubber tubing and ammoniacal carmine solution. The valve of the syringe dips into a bottle reservoir at the side of the patient, and the tubing, fixed to the nozzle of the syringe, is led around the body to a desired point in the limb, the end of the rubber tubing being embedded in the simulated wound. Arterial bleeding is imitated by causing the patient to squeeze the bulb of the syringe in time with the cardiac rhythm. The patient's face is "made up" to suggest profound shock. He is taught to act his part. The effect is so realistic that several medical men have been unable to differentiate the simulated wounds from real ones, and it is said that about 1 per cent of the audiences fainted. The authors have reproduced simple lacerations, burns, compound fractures, arterial hemorrhage and the like. They also staged and filmed a mock air raid incident in which trapped and wounded casualties were liberated from heavy débris and treated first by street methods and ultimately in a first aid post. The films have been shown at first aid posts and to wardens, firemen, army units, the first aid personnel of business firms and the general public. The practical and instructional value of these films is self evident.

"PATENT MEDICINE" SHOWS

Physicians have noted rather blatant claims in present day "patent medicine" advertising on the radio. Protection of the public against such nostrums has increased greatly since the time when the ancient vender went from town to town with a horse and wagon, accompanied by an old Indian chief and a banjo player and carrying a stock of "cure-alls." Advertising beyond the package—that is, newspaper, magazine and radio advertising—did not receive the special consideration of any federal agency until the enactment of the Wheeler-Lea Amendment to the Federal Trade Commission Act. A clause in that particular act reads "The term 'false advertisement' means an advertisement, other than labeling, which is misleading in a material respect; and in determining whether any advertisement is misleading, there shall be taken into account (among other things) . . . representations made or suggested by statement, word, design, device, sound, or any combination thereof . . ." This includes, no doubt, statements that are made via radio. Following the enactment of this legislation an attempt was made by some promoters to avoid direct statements of a misleading character by adding a qualifying word or phrase. This makes little, if any, difference in the impression created when such words are hurriedly read by the announcer. Such phrases as "in the absence of an organic trouble, this will build your blood back to normal," "acts to prevent," "we believe it reduces," "perhaps your kidneys are to blame" and "should give you soothing relief" are seldom carefully analyzed by the vast majority of listeners. The radio stations over which such material is being broadcast will become interested in the misleading nature of the copy. Their programs are subject to review by the Federal Communications Commission every six months in connection with the reissuance of their licenses.

1. Humble, B. H., and Mearns, A. G.: Color Films in First Aid Training, Lancet 1: 569 (May 9) 1942.

COSMETICS AND THE LAW

The following item appears in the Information Digest for April 2, 1942, issued by the Office of Government Reports at Washington, D. C.:

HEALTH AND WELFARE

The Food and Drug Administration, since enactment of the Food, Drug and Cosmetic Act of 1938, has seized more than 300 consignments of cosmetics containing potentially dangerous ingredients, Federal Security Administrator McNutt announced. Articles such as sight-destroying eyelash dyes, harmful skin bleach creams, lipsticks and a highly injurious permanent waving solution were taken. Mr. McNutt said the law has brought "a marked improvement in the safety of cosmetics now on the market."

The information calls attention to the fact that some manufacturers seem to be motivated entirely by the desire for profit and without regard for the welfare of the consumer. Especially reprehensible is the promotion of products for enhancing beauty which have such vicious results as the destruction of eyesight. The cosmetic industry is now undergoing experiences similar to those encountered by the drug industry in the years following the enactment of the first comprehensive piece of legislation definitely affecting them—the Food and Drugs Act of 1906 as amended. Some concerns in the cosmetic field are following closely in the footsteps of those pharmaceutic concerns which in 1906 instituted the reforms which led to their development as ethical concerns. Those houses were encouraged in their efforts by the work of the Council on Pharmacy and Chemistry in that field. Similarly, the consideration for the acceptance of advertising in the publications of the American Medical Association of cosmetic preparations which the manufacturers submit with adequate information as to the suitability of the formula and with limitation of claims to honest statements may serve to encourage the further development of ethical cosmetic concerns. Needless to say, some others will continue to flout, evade and violate the provisions dealing with cosmetics in the legislation mentioned. The vast majority of cosmetic preparations on the American market are safe to use. Those who market cosmetic preparations without sufficient scientific study to establish safety should be ready to accept the fullest penalties that the laws provide.

MEDICINE AND THE WAR

In this section of The Journal each week will appear official notices by the Committee on Medical Preparedness of the American Medical Association, announcements by the Surgeon Generals of the Army, Navy and Public Health Service, and other governmental agencies dealing with medicine and the war, and such other information and announcements as will be useful to the medical profession.

THE PROCUREMENT OF PHYSICIANS

A Statement for The Journal of the American Medical Association

PAUL V. McNUTT
Washington, D. C.

On June 8 I described to the American Medical Association at its Atlantic City meeting the acute need for physicians for the military services. I pointed out how far the recruitment of physicians lagged behind expected quotas. In conclusion I stated bluntly the fact, which could not have been evaded by any analysis, that unless voluntary recruitment progressed more rapidly some more rigorous form of selective service must be resorted to.

Those facts were necessary in order to permit the medical profession to diagnose its own case. And the case is urgent; physicians are members of what is probably the most indispensable of all professions. Despite the harshness of the facts and the bluntness with which I had to state them, I felt that the profession should be informed.

In fairness to the recruitment record of many of our states, it seems in order at this time to give the profession some further idea of how its problem is distributed. The failure of a sufficient number of physicians to volunteer for military service is not spread thinly over the whole country. There is an acute lag in certain populous states. Other states have supplied nearly all that they should supply.

We need more than twenty thousand additional physicians by the end of this year. But eight states —New York, Illinois, California, Pennsylvania, Massachusetts, New Jersey, Michigan and Ohio—should account for nearly sixteen thousand of that shortage.

By contrast, sixteen states have fewer than a hundred physicians to go to reach the total number they should supply. In order not to deplete unduly available medical service in those areas, we are asking that the Medical Officers Recruiting Boards be withdrawn and that further enlistments from those areas be then discouraged except in the case of the men under 37 in the urban areas. Those states are Alabama, Arizona, Delaware, Idaho, Louisiana, Mississippi, Montana, Nevada, New Mexico, North Dakota, South Carolina, South Dakota, Utah, Vermont, Wyoming and Virginia.

The acute problem for the next few months for those states is an equitable distribution of medical service within their borders. This will avoid the necessity for any consideration of plans to allocate doctors from other states to meet civilian needs.

More than one hundred and thirty thousand physicians have returned their registration forms to the Roster for Scientific and Technical Personnel. Those forms are now being processed. When that work is complete we shall be able to give the profession a more comprehensive report on the relation of available medical service to wartime needs.

The seriousness of the deficit in the number of physicians available for armed forces should not be underestimated. The need must be met. It will be met by one method or another. Neither must we underestimate the serious drain this puts on available medical services in civilian communities. It will mean long hours and hard work—sacrifices which will multiply the deep debt that every community owes to its physicians.

It cannot be met simply by multiplying the hours of the physicians who are left. There will be a real need to exercise every possible means for minimizing unnecessary medical services in order that the real needs may be met.

It is my belief that the lag in recruitment has been due chiefly to the fact that the individual physician has not realized the genuine urgency of the need. Measures must be taken which will bring those home to every individual. This means that there will have to be some education of the general public. Preventable illness must be reduced to a minimum. Unreasonable demands on the physician's time must be reduced to a minimum. Thus only may available medical service adequately cover the needs.

PROVISIONS OF THE AMERICAN RED CROSS FOR THE CARE OF CASUALTIES CAUSED BY ENEMY ACTION

At the request of the Surgeon Generals of the Army and Navy the American Red Cross and the Division of Medical Sciences of the National Research Council have organized and are conducting a joint undertaking to procure from voluntary donors large amounts of human blood to be processed into dried blood plasma to be used for transfusions. It was agreed that this plasma is to be available not only for a military emergency but also for civilian catastrophes for which blood transfusions may be indicated.

The organization known as the Red Cross Blood Donor Service is the only official agency for recruiting blood donors for the armed forces and for the U. S. Office of Civilian Defense. It has established blood donor centers in eighteen of our larger cities that are conveniently near the laboratories producing dried blood plasma for the armed forces. About four hundred thousand donations of blood had been procured by the service up to June 15, and plasma is being processed and released to the Army and Navy as rapidly as pos-

sible. This project is being carried on at an accelerating rate.

At present the available plasma by no means adequately meets the requirements of the armed forces, which at such a time must have first call on all our efforts to assist in their care and support. However, large amounts of human blood plasma are being produced, and the Surgeon General's Office of the Army, acting for itself and the Navy, is cooperating with the Red Cross as far as present conditions allow for the protection of the civilian population.

Army Regulations No. 500-60, issued Dec. 1, 1939, govern the War Department activities in connection with disaster relief. These regulations recognize the responsibility for the relief of suffering in case of disaster placed on the American National Red Cross in its congressional charter of Jan. 5, 1905 and establish the methods of cooperation between the United States Army and the Red Cross. These regulations set forth a mechanism by which the Red Cross may call on the Army for supplies and medicines whenever disaster or catastrophes demanding such assistance may occur. This relationship has recently been confirmed by the Surgeon Generals as applying to the supply of dried blood plasma that may be available in this country in case of a catastrophe among the civilian population. It may be said, therefore, that the supply of dried human plasma held by the Army in this country may be called on by the Red Cross for civilian catastrophes in which blood transfusions may be indicated.

Because of the fact that up to the present time the Army and Navy are not maintaining a large supply of plasma in this country, the Surgeon General's Office of the Army has allowed the Red Cross to procure a supply of dried plasma from that being processed for the armed forces. This supply is being held by the Disaster Relief Service of the Red Cross in a number of its chapters in so-called target areas, and, as the available amount of plasma increases, these depots are being backed up by larger amounts at strategic points. It is thus planned to have on hand a supply of plasma that may be used during the first few hours of a catastrophe and a larger supply not far away that can be called on immediately. This plan of distribution has been determined in conjunction with the Medical Division of the United States Office of Civilian Defense, and the plasma is to be released immediately by the Red Cross to an authorized representative of the Medical Emergency Service of the Office of Civilian Defense in any locality where enemy action has caused casualties.

Other measures for civilian protection have been taken by the Red Cross. As the Blood Donor Service has supplied blood to the laboratories somewhat faster than they have been able to complete the drying process at the beginning of their operations, a large number of units are being held in the frozen state. The Army and the Red Cross have agreed to release a large supply of frozen plasma on the Pacific Coast to the Surgeon General of the U. S. Public Health Service from the processing laboratory there, which will be available for civilian protection through cooperation with the Office of Civilian Defense. Frozen plasma in other laboratories may also be made available for civilian protection.

The Red Cross Blood Donor Service is also procuring blood directly for the Office of Civilian Defense, which plans to have 50,000 units of dried plasma processed in a laboratory that is not being used for military purposes. The service has arranged that its highly trained bleeding teams, of which there are about forty in the blood donor centers, shall be on call at all times as blood procurement teams in case of catastrophe. These teams consist of a doctor, four graduate nurses, a secretary and one or two men helpers. The whole blood that may be on hand in the refrigerators of any blood donor center when a catastrophe occurs will be available to hospitals for transfusion purposes if needed.

Blood donor centers are located in Boston, New York, Brooklyn, Philadelphia, Baltimore, Washington, Pittsburgh, Rochester, Buffalo, Cincinnati, Cleveland, Indianapolis, St. Louis, Chicago, Detroit, Milwaukee, San Francisco and Los Angeles.

These facilities of the American Red Cross for providing blood for transfusions of civilians that may be injured by enemy action indicate that, if and when enemy attacks on the civilian population occur, a transfusion service will be available. These facilities are being gradually expanded and supplemented by the developments sponsored and directed by the Office of Civilian Defense, to which the Red Cross has given full cooperation.

As the supplies of plasma of the armed forces increase in this country, the amount available to the Red Cross in case of civilian catastrophes will be further reassuring.

COURSES ON CHEMICAL DECONTAMINATION PROBLEMS

Starting June 29 and again on July 13, four day courses on chemical decontamination problems will be given at the Massachusetts State College, Amherst, Mass. Registration will be limited to fifty for each of the courses, which are sponsored by the Massachusetts State College, the Massachusetts Department of Public Health and the Massachusetts Committee on Public Safety in cooperation with the United States Office of Education, with the object of training chemists and bacteriologists in methods of contamination detection and decontamination of water supplies, foods and areas so that municipalities may have competent technical advisers to the local committees on public safety. The major portion of the course will comprise work in the laboratories and field demonstrations. Applications for registration, which may be made to any local civilian defense headquarters, will be accepted from citizens of the United States who have completed an approved four year college course, majoring in chemistry or bacteriology, plus two years of professional experience, or six years of equivalent professional experience. Rooms will be provided for three nights in dormitories at Massachusetts State College, and meals will be served at the college dining hall. The total cost of rooms and meals will be $8 per person.

DEGASSING STATIONS IN SAN FRANCISCO

San Francisco has the most comprehensive program for antigas protection of any large community in the United States, Col. George Baehr, chief of medical division of the Office of Civilian Defense, is reported to have said the latter part of May on a tour of inspection of the degassing station at San Francisco Hospital. According to the San Francisco *Chronicle* of May 26 the board of supervisors of the city authorized forty-one degassing stations throughout the city and appropriated a total of $689,564 for civilian defense. The chairman of the Red Cross gas committee, Dr. M. L. Tainter, has prepared a plan which would provide for a defouling unit for nearly every square mile of San Francisco, and at an estimated cost which would be, it was said, remarkably low.

MOBILE UNIT OF CHICAGO BLOOD DONOR SERVICE

The Chicago chapter of the American Red Cross placed in operation, June 8, a mobile unit for the collection of blood from donors. Certain requirements must be filled by the local community requesting the mobile unit, and the facilities must be inspected and approved by a representative of the blood donor service of the American Red Cross before a definite date can be arranged. There must be a minimum of 100 persons over 18 and under 60 years of age who weigh 120 pounds or more and who are in good health. The local facilities must provide a clean, well ventilated space adequate for (1) a reception room to accommodate about 16 persons, (2) a room to accommodate ten cots with a sink with running water, (3) a smaller adjoining room or additional space which may be curtained off to be used as a recovery room, (4) a room with adjoining kitchen facilities which may be used as a canteen, (5) conveniently located toilets.

For the present, the mobile unit will not be sent outside of the area covered by the Chicago chapter of the American Red Cross, which includes Cook and Du Page counties and the southern half of Lake County, Ill.

MANY JUNE GRADUATES ENTER MILITARY SERVICES

The annual national survey of colleges, technical schools, other than military academies and theological seminaries, and universities in the United States made by the Investors Syndicate indicates that 50 per cent of all the male graduates in June from one hundred and fifty-six leading institutions would join the Army, Navy or Marine Corps after commencement. Of another group of sixty-six schools, more than 25 per cent of the graduates were to enter the military services, while of a third group of one hundred schools less than 25 per cent of the graduates were to enter the military services.

Among the non-war positions offered to graduates, the profession of teaching received two out of every five "mentions," while secretarial work ranked second to teaching in non-war employment opportunities, being cited in one seventh of the "mentions."

The survey indicated that less than 3 per cent of the June graduates would enter such fields as medicine, chemistry, nursing, laboratory research, banking, selling, social work, home economics, accounting and clerical work.

MEDICAL AND SURGICAL RELIEF COMMITTEE

The Medical and Surgical Relief Committee, a nonprofit relief organization organized in 1940, is composed of physicians, surgeons and dentists throughout the United States who have volunteered their assistance. Since the United States went to war the policy of the committee has been to concentrate its efforts on relief in the United States. Up to June 4 the committee had supplied one hundred and eighty-six emergency medical field units to hospitals and casualty stations throughout the country. Now the committee intends also to distribute emergency medical field units to whatever country our own fighting forces are sent.

The committee has its headquarters at 420 Lexington Avenue, New York City, where it functions under a permit under the department of state (No. 357). A report is filed with the department of state every month, and the accounts are audited quarterly by certified public accountants. The committee is dependent on public contributions for its support. Its medical and surgical supplies are obtained from the medical profession, which contributes used and obsolete surgical instruments, food supplies and pharmaceuticals. The instruments are reconditioned and then distributed. The committee, which is constantly sending canned foods and pharmaceutic products to welfare agencies, has recently sent a large amount of milk products to be distributed to the undernourished children of Tennessee, Georgia and the Carolinas. The committee recently donated 23 cases of dental instruments and supplies to Dr. Gordon Agnew, professor of dental surgery in West China University, of whom word has been received of his safe arrival in China with these supplies. Many foot dental drills which had been donated by the committee of dentists throughout the country will be found useful in districts where there is no electricity.

During May supplies valued at $10,240.64 were furnished needy hospitals, first aid posts, emergency medical services and other relief agencies in the United States and allied nations. The shipments included 41 emergency medical field sets, 11 cases of assorted instruments, 31 cases of medical supplies, and concentrated foods.

CIVILIAN DEFENSE

The Cambria County (Pa.) commissioners have purchased thousands of dollars' worth of medical supplies for the health committee of the Johnstown Defense Council, and these have been recently distributed among the mobile units.

At a conference in Duluth, May 11, Major Paul Swan of St. Paul, of the Minnesota Defense Force, said that the state serum laboratory has prepared a reserve of serum which will be distributed to key points in Minnesota and northern Wisconsin for use in emergencies; the serum will be distributed under the direction of the Minnesota adjutant general. At this meeting the coordination of the medical phases of civilian defense in northeastern Minnesota and northwestern Wisconsin were discussed by Dr. Frank J. Elias of Duluth, chairman of the ninth councilor district of the Minnesota State Medical Association, and Dr. Wallace D. Hunt of the seventh corps defense region and officials from Minnesota and Wisconsin.

COURSE ON MEDICAL ASPECTS OF CHEMICAL WARFARE

The second five day course on medical aspects of chemical warfare was conducted on April 20-24 by the Medical Division of the Office of Civilian Defense in cooperation with the University of Cincinnati College of Medicine and the assistance of the Chemical Warfare Service, Edgewood Arsenal, Maryland. The thirty-six physicians who attended the course were addressed, among others, by Drs. James H. Bennett, Marion A. Blankenhorn, Albert L. Brown, R. H. Broh-Kahn, Howard D. Fabing, Leon Goldman, Robert A. Kehoe, Milan A. Logan, Willard Machle, Arthur Mirsky, Vinton E. Siler and Mr. George Hermann.

Similar courses were presented in the Western states at Los Angeles, June 5-7; Palo Alto, May 29-31, and Seattle, June 12-14. A group of instructors is thus being trained who will conduct institutes for physicians in their own communities in cooperation with the state and local medical societies and the state and local defense councils.

EMPTY VACOLITERS GIVEN TO ARMY AND NAVY IN HONOLULU

Since the raid on Pearl Harbor, Hospital Purveyors, Ltd., has issued more than 8,000 empty vacoliters free of charge to the army and navy and the several hospitals in and about Honolulu, and these hospitals have been permitted to retain the empty containers, since they use the contents for intravenous injections. The vacoliters are the property of the Baxter Laboratories of Glendale, Calif., and in normal times are returned to the laboratory for refilling. Mr. Emery S. Beardsley, president of Don Baxter, Incorporated, has authorized the manager of Hospital Purveyors to continue donating these containers as long as they may be of use to the community. Each empty vacoliter is valued at thirteen cents.

AIR RAID CASUALTY STATIONS

Los Angeles County, Calif., now has an air raid casualty station available for every 10,000 of population, Dr. W. L. Halverson, county health officer, reports. He says there is a total of one hundred and eighty stations, 53 per cent of them fully equipped, and the remainder partially equipped. The lack of equipment at some stations is not serious, as equipment from nearby stations can be easily transferred.

PAN AMERICAN DELEGATES TO THE NINETY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-12: AMONG THOSE INCLUDED IN THIS PICTURE, TAKEN AT THE RECEPTION TO THE VISITORS BY THE BOARD OF TRUSTEES AND THE COUNCIL ON SCIENTIFIC ASSEMBLY, ARE DR. AND MRS. FRED W. RANKIN, LEXINGTON, KY.; DR. FRANCO SEBASIAO VIEIRA, BRAZIL; DR. JOSE RODRIQUEZ PASTOR, PUERTO RICO; DR. OLIN WEST, CHICAGO; DR. JAMES E. PAULLIN, ATLANTA, GA.; DR. MORRIS FISHBEIN, CHICAGO; DR. AND MRS. RAIMUNDO DE CASTRO, CUBA; DR. AND MRS. ELVIRA REY CHILIA, CUBA; DR. AND MRS. ALEJANDRO LIPSCHUTZ, CHILE; DR. HUGH S. CUMMING, WASHINGTON, D. C.; DR. AND MRS. VICTOR ESCARDO Y ANAYA, URUGUAY; DR. LUTHERO VARGAS, BRAZIL; DR. MANUEL SALCEDO, PERU; DR. VICENTE S. TOYOS GOMEZ, CUBA; DR. DARIO VERA GONZALEZ, PARAGUAY; MISS MARTA DE CASTRO, CUBA; DR. AND MRS. JORGE CAVELIER, COLOMBIA; DR. B. SEPULVEDA, MEXICO; DR. VAZQUEZ, MEXICO; DR. IGNACIO CHAVEZ, MEXICO; DR. JOSE B. GOMEZ, ARGENTINA; DR. AQUILES ERMINY, VENEZUELA; DR. ANGELO LOBO MACHADO, BRAZIL; DR. ENRIQUE KOPPISCH, PUERTO RICO; DR. CAJIGAS, PUERTO RICO; DR. MARTINEZ, PUERTO RICO; DR. RAUL FERNANDES, BRAZIL; DR. CARLOS M. QUINTEROS, ARGENTINA; DR. JOAS-JACQUES DORNELLES, BRAZIL; DR. RUTILIO ALAMILLA GUTIERREZ, MEXICO; DR. FREDERICO VAN DOMSELAAR, ARGENTINA; DR. RENE BARON, ARGENTINA; DR. ENRIQUE JOSE CERVANTES, NEW YORK; DR. RUY GOYANNA, BRAZIL; DR. RAUL ALCAYAGA, ARGENTINA; DR. PINOCHET MOREIRA, CHILE; DR. MANUEL ROCA-GARCIA, COLOMBIA.

ORGANIZATION SECTION

PROCEEDINGS OF THE ATLANTIC CITY SESSION

MINUTES OF THE NINETY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD IN ATLANTIC CITY, JUNE 8-12, 1942

HOUSE OF DELEGATES

Second Meeting—Tuesday Morning, June 9

The House of Delegates was called to order at 9:35 a. m. by the Speaker, Dr. H. H. Shoulders.

Roll Call and Presentation of Minutes

On motion of Dr. William R. Brooksher, Arkansas, seconded by Dr. James Q. Graves, Louisiana, and carried, the House dispensed with the roll call and with the reading of the minutes.

Report of Reference Committee on Credentials

Dr. J. Newton Hunsberger, Chairman, reported that one hundred and sixty-three members of the House of Delegates had been registered, that there are one hundred and seventy-five members of the House in all, but that there are two from the Philippine Medical Association who cannot be here, one from the Hawaii Territorial Medical Association and several others who cannot be in attendance.

Presentation and Address of Surgeon General James C. Magee

Dr. Fred Rankin, President-Elect, presented the distinguished Surgeon General of the United States Army, Major General James C. Magee, who addressed the House as follows:

Colonel Rankin, Dr. Shoulders, Gentlemen: I had the privilege of appearing before this body two years ago at the beginning of the present military emergency. I am very happy now to have the opportunity of repeating that experience. I have no intention of making a speech because I think the points of view of my office have already been fully explained by Colonel Lull, who I understand has explained our position in detail. I do want, however, to make clear to you all my very deep sense of appreciation of the efforts expended by this House and by the medical societies that it represents in the furtherance of the medical effort in the present war. We all know that we are having lots of difficulties, but they have not been insurmountable, and whatever those may be that are now facing us, I am quite sure that they will be ironed out. This is probably America's largest medical military effort. It must go through and I am quite sure it will go through. Meanwhile, I would like to say a word further. I believe in the last two years that we have witnessed a type of medical service for the American soldier that has never been excelled by any nation. I believe I can safely say that no soldier has gone without proper medical care or succor. He has been skilfully treated; he has been skilfully treated because the character of men in organized medicine in America is superior to any. And if we continue in the future as we have in the past, I believe the American medical profession will add to its laurels. I am very happy to be here and I will not detain you longer.

Report of Reference Committee on Medical Education

Dr. Walter G. Phippen, Chairman, presented the following report, which on motions, duly made, seconded and carried, was adopted section by section and as a whole:

1. Request that American Medical Association Inspect and Approve or Disapprove Present and Future Schools for Training of Medical Record Librarians: Your reference committee considered the request presented by Dr. W. A. Coventry, Minnesota, on behalf of the American Association of Medical Record Librarians, and duly heard its proponents and members of the Council on Medical Education and Hospitals. This request is that the American Medical Association undertake the standardization, inspection, approval and listing of schools for the training of medical record librarians. Your reference committee believes that this is a proper function of organized medicine and that the need of such standardization is imperative. Your reference committee believes that this undertaking should properly be carried out by the Council on Medical Education and Hospitals, but that since it involves the expenditure of funds your reference committee recommends that the standardization, inspection, approval and listing of schools for the training of medical record librarians be referred to the Board of Trustees.

2. Report of Council on Medical Education and Hospitals on Demise of Dr. William D. Cutler: Your reference committee has reviewed the report of the Council on Medical Education and Hospitals and notes with sorrow and with approval the statement on the demise of Dr. William D. Cutler and moves the adoption of that statement.

3. Report of Council on Medical Education and Hospitals on Programs for Accelerated Curriculums and for the Medical Student: Your reference committee agrees with the wisdom of the Council on Medical Education and Hospitals in recommending the policy of local self determination by individual medical schools in adopting a program for accelerated curriculums. It commends the Council on Medical Education and Hospitals for the part that it played in working out a program for the medical student vis-á-vis his military obligations and for its study and consideration of these situations caused by depletion of interns, residents and faculty members.

4. Appendix to Report of Council on Medical Education and Hospitals: Your reference committee has reviewed the appendix to the report of the Council on Medical Education and Hospitals entitled "Essentials of an Approved Internship" and recommends that the first sentence in paragraph one of section seven entitled Radiology be changed to read as follows: "This department should be equipped with suitable shockproof apparatus." With this small change your reference committee recommends the adoption of "Essentials of an Approved Internship" as presented in the appendix of the report of the Council.

5. Outline of "Essentials of an Acceptable School for Clinical Laboratory Technicians": Your reference committee recommends at the request of the Council on Medical Education and Hospitals that the outline of "Essentials of an Acceptable School for Clinical Laboratory Technicians" adopted in its revised form June 4, 1941 be amended by the introduction of the words "approved medical schools" in chapter one, paragraph one so that its first sentence reads as follows: "Acceptable schools for training laboratory technicians may be conducted by approved medical schools, general hospitals, or state health laboratories affiliated with hospitals where the majority of the student's practical training is received."

Respectfully submitted,

WALTER G. PHIPPEN, Chairman.
JAMES R. MILLER.
EDWARD H. SKINNER.
A. W. ADSON.
L. J. MENVILLE.

DR. CARLOS M. QUINTEROS, ARGENTINA; DR. JOAS-JACQUES DORNELLES, BRAZIL; DR. RUTILIO ALAMILLA GUTIERREZ, MEXICO; DR. FREDERICO VAN DOMSELAAR, ARGENTINA; DR. RENE BARON, ARGENTINA; DR. ENRIQUE JOSE CERVANTES, NEW YORK; DR. RUY GOYANNA, BRAZIL; DR. RAUL ALCAYAGA, ARGENTINA; DR. PINOCHET MOREIRA, CHILE; DR. MANUEL ROCA-GARCIA, COLOMBIA.

Report of Reference Committee on Hygiene and Public Health

Dr. Felix J. Underwood, Chairman, presented the following report:

1. Resolution Expressing Appreciation of American Medical Association for Friendly Cooperation of the Broadcasting Companies: Your reference committee approves the resolution presented by the Board of Trustees to the effect that a copy of its resolution expressing the appreciation of the American Medical Association for their friendly cooperation be transmitted by the Bureau of Health Education to the broadcasting companies.

2. Report of Board of Trustees Dealing With Work of Bureau of Health Education: Your reference committee warmly approves the work being done by the Bureau of Health Education in every way, but more particularly in the matter of its radio series Doctors At Work, which has now been in production over two years and which, in itself, is a development of eight years of effort. The trustees might well consider the expenditure of funds for the further development of this type of program.

3. Report of Committee to Study Problems of Motor Vehicle Accidents: Your reference committee approves the report and commends the Red Cross and other agencies which have interested themselves in first aid. Attention is called to the fact that first aid manuals are written by physicians and that first aid teaching is initially done by physicians and that the cooperation lies in their willingness to render the service and the willingness of the agencies concerned to accept it.

4. Resolution on Control of Venereal Disease: Your reference committee approves of the resolution in principle. The committee is not in a position to adjudicate the ethics of the situation, but it is convinced that the practice brought out by the resolution is detrimental to the efforts for reducing the incidence of venereal disease.

Respectfully submitted,

FELIX J. UNDERWOOD, Chairman.
W. F. DRAPER.
HOLMAN TAYLOR.
ROBERT L. ANDERSON.
F. S. CROCKETT.

On motions duly made, seconded and carried, the first three sections of the report of the reference committee were adopted.

Dr. Underwood moved the adoption of the fourth section of the report referring to the Resolution on Control of Venereal Disease. Dr. Arthur T. McCormick, Kentucky, moved as a substitute that the House adopt the resolution as presented. This motion was seconded, and after discussion by Drs. Thomas A. McGoldrick, New York, R. W. Fouts, Vice Speaker, A. T. McCormack, Kentucky, Clyde L. Cummer, Section on Dermatology and Syphilology, and Holman Taylor, Texas, it was moved by Dr. Clyde L. Cummer, Section on Dermatology and Syphilology, that this section of the report be rereferred to the reference committee for revision, and the motion was seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, Dr. McCormack withdrawing his motion. The motion to rerefer this section of the report to the reference committee was adopted.

On motion of Dr. Underwood, seconded by Dr. A. T. McCormack, Kentucky, and carried, the report was adopted as a whole with the exception of the fourth section, which was rereferred to the reference committee.

Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. Walter E. Vest, Chairman, presented the following report:

1. Resolutions Requesting Change in By-Laws Limiting Time for Introduction of New Business in House of Delegates: Your reference committee has considered the resolutions presented by the State Medical Society of Wisconsin proposing that all resolutions introduced by delegations from the constituent associations be presented to the Secretary of the American Medical Association sixty days in advance of the annual session and referred by the Secretary to the state secretaries and the individual delegates to the American Medical Association.

It is the opinion of your reference committee that the principle embodied in this resolution is sound but that the adoption of the proposed amendment to the By-Laws would prove unpractical, in that it would necessitate that resolutions adopted by state associations within the proposed sixty day period lay over until the second annual session of the American Medical Association's House of Delegates subsequent to their adoption by the state associations. Your reference committee recommends that the resolutions introduced by the State Medical Society of Wisconsin be not adopted.

Your reference committee recommends to the constituent state associations, however, that the principles involved be followed and that resolutions adopted by state associations intended for presentation to the House of Delegates of the American Medical Association be presented to its Secretary promptly after adoption by such state associations and that such resolutions as are received in time be published in the number of THE JOURNAL containing reports of officers.

2. Report of Judicial Council on Amendment to Constitution Relative to Composition of House of Delegates: Your reference committee has carefully considered that portion of the report of the Judicial Council referred to it for consideration, that is the recommendation that the Constitution, article 5, section 2, be amended to make delegates elected by the sections of the Scientific Assembly ex officio delegates without the right to vote.

It is the opinion of your committee that the Constitution should not be so amended because (1) a large number of the members of the American Medical Association are now in government service and are therefore unlikely to wield influence on their representatives in this House of Delegates and (2) the adoption of such an amendment might tend toward the classification of the American Medical Association as a business league rather than as it is now classified; namely, as a scientific body. Your reference committee therefore recommends that the reapportionment of 1943 be made under the existing constitutional provisions.

3. Proposed Amendment to Constitution Relative to Number of Trustees: Your reference committee has given careful consideration to the proposed amendment to the Constitution presented to the House of Delegates at the Cleveland session in 1941, and it is its opinion that this proposed amendment should not be adopted.

The Board of Trustees as at present constituted seems to have discharged its varied and important duties in a highly efficient manner, leaving no reason to believe that numerical expansion of the Board would increase its efficiency.

Respectfully submitted,

WALTER E. VEST, Chairman.
WALTER F. DONALDSON.
KARL S. J. HOHLEN.
EDWARD M. PALLETTE SR.
WILLIAM WESTON.

The first section of the report of the reference committee was adopted on motion of Dr. Vest, seconded by Dr. William R. Brooksher, Arkansas, and carried after discussion by Drs. T. K. Gruber, Michigan; Arthur J. Bedell, Section on Ophthalmology, and Dr. Vest.

No action was taken on the second section of the report of the reference committee, since the Speaker ruled that the subject matter therein contained had been referred to the Reference Committee on Sections and Section Work.

The recommendation of the reference committee contained in the third section of the report was adopted by rising vote on motion of Dr. Vest, seconded by Dr. A. T. McCormack, Kentucky, and carried after discussion by Drs. Edward H. Cary, Texas; Thomas S. Cullen, Maryland; William R. Molony Sr., California; Edward H. Skinner, Section on Radiology; John Z. Brown, Utah; William Weston, Section on Pediatrics; John H. Fitzgibbon, Oregon; Walter B. Martin, Virginia; A. T. McCormack, Kentucky; Olin West, Secretary, and Dr. Vest.

On motion of Dr. Vest, seconded by Dr. A. T. McCormack, Kentucky, and carried, the report of the reference committee, with the exception of the second section on which no action was taken, was adopted as a whole.

Report of Reference Committee on Reports of Officers

Dr. Deering G. Smith, Chairman, presented the following report which on motions duly made, seconded and carried, was adopted section by section and as a whole:

1. Address of Speaker: Your reference committee appreciates the leadership of the Speaker in the efforts of this House of Delegates to preserve the "American way of life." He has made a keen analysis of the present situation and your reference committee agrees with him that the record of the medical profession is "altogether sufficient to give to the American people, to soldiers and to the mothers and fathers of soldiers, the highest form and the fullest measure of assurance as to what you and the profession you represent can be depended on to do today, tomorrow and until victory has been won."

2. Address of the President: Dr. Lahey has been a militant leader of our Association during these troublesome times, and his work as Chairman of the Board of Procurement and Assignment Service has been outstanding. Your reference committee approves of his preparedness and war efforts, which took precedence over the usual presidential duties. He has taken every opportunity to try to make the public and the medical profession conscious of the seriousness of the war. In spite of his efforts and the efforts of others, it is apparent that the country is still not aware of the urgency of the situation. Your reference committee expects that you, as leaders of the medical profession, will assist Dr. Lahey in preaching this gospel "that optimism is one of the things which can lead to our downfall."

3. Address of the President-Elect: It is very fitting and indeed remarkable that our President-Elect should also hold a high position in the Army of our country. In his address, he has shown deep insight into the many problems now confronting the medical profession. Your reference committee believes that the physicians appreciate the privilege of having been accorded a voice in the allocation of medical personnel in the war program and recommends that we stand back of the Procurement and Assignment Service. It agrees with Dr. Rankin that this is a young man's war but that the old men left at home will have to do work of equal importance and believes that the standards of medical education, including internship, should be kept at as high a level as is consistent with the war effort. Every attempt should be made to conserve the teaching facilities, including even essential younger men, so that the supply of well trained physicians shall be maintained. Your reference committee concurs in the necessity for the curtailment of the postgraduate education of specialists. The principles of this curtailment have been stated clearly in the address of the President-Elect. The suggestion of Dr. Rankin that meetings for the postgraduate education of the general practitioner, with programs featuring intensive instruction by competent teachers with the elimination of discussions, be sponsored by this Association seems to be admirable. Your reference committee recommends that this proposal be referred to the Board of Trustees for study.

Respectfully submitted,

DEERING G. SMITH, Chairman.
EDWARD C. PODVIN.
THOMAS A. PITTS.
J. H. IRWIN.
MEREDITH MALLORY.

Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. L. H. Bauer, Chairman, presented the following report, which on motions of Dr. Bauer, duly seconded and carried, was adopted section by section and as a whole:

REPORT OF SECRETARY

Membership and Fellowship: Your reference committee notes with satisfaction the steady increase in membership and Fellowship in the Association. It seems to the committee that the increases are an indication of a steadily mounting feeling among physicians of the importance of being associated with organized medicine.

Secretaries' Conference: The Secretaries' Conference held annually is an excellent additional means of coordinating all state activities with those of the national body and these conferences should be continued.

War Activities: These will be discussed in detail by another committee and are referred to only for sake of completeness and to invite the attention of the House to the fact that a tremendous strain has been thrown on the Secretary's Office by the necessity of carrying on these war activities.

Submission of Memorials and Resolutions: The matter of requiring all memorials and resolutions for the House of Delegates to be submitted in advance so that they may be printed prior to the session is a good idea in theory but not practicable of execution. As a resolution pertaining to this specific matter has been introduced and referred to another committee for action, this committee makes no recommendation about it.

Suspension of Dues for Military Service: This is a matter of information and requires no action other than education of the members. It does not seem to be clearly understood that no member as such pays any dues whatever to the American Medical Association. His membership is contingent on his being a member in good standing in his county or district society, and of the dues which he pays to his county and state societies not one cent accrues to the American Medical Association. Only Fellows pay dues, and these dues are largely in payment of the publications to which they may subscribe. Therefore it seems to your reference committee that not only is it a fact that Fellowship dues cannot be suspended or remitted without amendment of the Constitution and By-Laws but also that there is no reason to suspend or remit them. The heavy load of dues is usually in the state and county assessments, and these organizations can take such action as they deem fit. In fact, many of them already have arranged for revision of dues for those in the military services. The subscriptions to the publications of the American Medical Association also furnish a means whereby the doctor in military service may keep abreast of the changes in general medicine pending the time he may return to private practice. Hence it does not seem to your committee that it is advisable to recommend amendment of the Constitution and By-Laws to provide for the remission of dues of Fellows who are in the military service.

Service of the Secretary: The committee notes that this year completes twenty years of service of Olin West as Secretary of the American Medical Association. He extends his thanks and appreciation as usual to all those with whom he has had contact. It seems to the committee that it is high time for the House of Delegates to pay tribute to Olin West. One familiar with organized medicine can hardly think of the American Medical Association without thinking of Olin West, and the converse is equally true. Your reference committee therefore recommends that the House extend its felicitation and thanks to Dr. West and its hope that he will continue to serve us as Secretary for many years to come.

REPORT OF BOARD OF TRUSTEES

The report of the Board of Trustees contains, as usual, a wealth of material which it behooves every member of the House to study. Specifically, your reference committee invites your attention to the following:

1. Income and Expenditures: It is comforting to note that gross income, income from Fellowship dues and subscriptions and income from advertising were all greater for 1941 than for 1940. However, not too much optimism should prevail, as costs are going up and income from Fellowship dues may decrease as the result of many Fellows entering the military service and not keeping up their Fellowships, and advertising is likely to fall off as the result of the restrictions on certain commodities. Increases are bound to occur also in wages and salaries, not only because of possible wage increases, but also because of additional personnel necessary to handle war activities. The maintenance of the Councils, bureaus and committees was about $22,000 less for 1941 than for 1940. This probably will not occur again. A new building for storage purposes had to be constructed. This cost will probably be nearly $215,000, but this is an expense that will not occur again, for many years at least. The Board of Trustees states that it is effecting economies wherever such economies will not interfere with efficient operation. It is a noteworthy fact which accounts probably in no small measure for the efficiency of the Association, that

many of the employees have been in its employ for fifteen to thirty-five years. This speaks for the employer-employee relationship of the Association.

2. THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION: Your reference committee notes with approval the action of the Trustees in dividing THE JOURNAL into three volumes a year instead of two. The program of medicine and war is approved. It is noted that the increase in subscribers to THE JOURNAL is steadily increasing, but there are still some states with less than 50 per cent of their physicians receiving it.

3. Special Journals: Two of these journals showed a loss in the number of subscribers, all the others an increase. Two of them show an increase in income over the cost of publication. There is still a loss incurred in the publication of these journals as a whole, but it is gratifying to note that last year the loss was over $18,000 less than for the preceding year. These journals fill a useful, even necessary, place, and their publication should be continued even though they are operated at a loss.

4. WAR MEDICINE: This journal has had a remarkable reception and it is filling a necessary place in medical publications. It is noted that the Division of Medical Sciences of the National Research Council wishes it to be published monthly. The matter of when and if this is to be done should be left to the Board of Trustees.

5. HYGEIA: HYGEIA had the largest subscription of any year of its existence through the efforts of the auxiliaries. It has been placed in a considerable number of schools, hospitals and reading rooms of women's clubs and other organizations. HYGEIA serves a useful purpose in educating the public in the principles of health and the aims of the American medical profession in improving the health of the general public. Effort should be made by the state and county societies to extend the distribution of this magazine.

6. Press Relations: The attention of those who have criticized the American Medical Association on its press relations is invited to the report of the Board of Trustees on this particular subject. More than eighty-one thousand stories were published in the daily press of the United States in 1941, all this in addition to a large number of feature stories and editorials. During the last annual session, more space in the local newspapers was given to the news of the session than in any previous session. Over thirty-one hundred inquiries have been received from newspapers and radio stations, which indicates that the Association is considered an authority on medical matters, as indeed it should be. The scope of the material issued covers practically the field of medicine. Your reference committee feels that the press relations activities of the Association should be commended and that effort should be made to continue these activities along the same lines.

7. Library: The use of the library is constantly increasing and, it is believed, would be even more extensively used if its services and facilities were more widely understood.

8. QUARTERLY CUMULATIVE INDEX MEDICUS: This is a most valuable publication. It is unfortunate that the war has interrupted exchange relations with many foreign periodicals and prevented the receipt of many others. Nothing can be done about it, however, and possibly some of the material can be indexed for historical purposes at a later date.

9. American Medical Directory: Your reference committee feels that this publication does not receive the publicity which it should. It is rather amazing that only about seventy-three hundred copies are distributed. This is an important reference book, and its value to hospitals, medical boards and county medical societies should be emphasized.

10. Cooperative Medical Advertising Bureau: This Bureau continues to carry on its efficient activities and is of material assistance to many state journals.

11. Mailing and Order Department: This requires no comment except to note the tremendous volume of mail passing through the Association's office.

12. Council on Pharmacy and Chemistry: The Council has continued its useful and satisfactory relations with various governmental agencies. In the field of new drugs the Council has been concerned with developments in sulfonamide therapy and in developments in the vitamin field. The Council has issued many reports and publications as in previous years. The work of the Council is approved and it is urged to keep a close watch on the development of vitamin therapy and to deprecate the tendency of certain commercial organizations to further "shot gun" vitamin therapy. The whole field of vitamin therapy should be clarified in order that therapeutic indications may be thoroughly understood. It should also continue to clarify the nomenclature in the production of new drugs and to discourage the use of multiple names for the same drug.

13. Council on Physical Therapy: The work of the Council on Physical Therapy is very diversified and the attention of the House is invited to the report of its work as stated in the report of the Board of Trustees. The work of the Council is commended and it is urged to use every effort to keep control of physical therapy in the hands of a responsible medical profession and not allow it to become a commercial football.

14. Council on Foods and Nutrition: This Council has been also largely concerned with the subject of vitamins, and the same recommendations are made to it as have just been made to the Council on Pharmacy and Chemistry. It is noted that the Council is gradually limiting its scope to devote more attention to those products which are most important from a health point of view. Your reference committee recommends approval of this trend. Steps should also be taken by the profession at large to educate the public on the purpose of the certification of foods, as the public very largely misunderstands the ideals and aims of the Association in such certification.

15. Chemical Laboratory and Tests and Standards: The Laboratory is now in its thirty-sixth year and has been a most useful adjunct to the Council on Pharmacy and Chemistry. Both the Laboratory and the Council on Pharmacy and Chemistry suffered severely in the loss of the secretary, Dr. Paul Nicholas Leech, and the member Dr. C. W. Edmunds. The Laboratory has carried out tests on many new therapeutic agents. Seventy-two substances have been examined in addition to the various dosage forms of other products. The Laboratory has cooperated with various other organizations. The Association may well be proud of the record of the Laboratory.

16. Council on Industrial Health: The work being done by this Council has great potentialities for service during the present emergency. There is industrial mobilization during this war as well as military mobilization. The Council feels that the physicians in community practice must be prepared to provide industrial health services in medium size and small plants and that a high degree of organization will be necessary to meet the medical requirements of wartime industrial production. Education of industrialists is essential if the advantages of medical supervision over workers is to be accepted. The Council recommends that an agency for public information, preferably attached to the Subcommittee on Industrial Health and Medicine, should undertake this educational activity. The Council wisely points out that failure to encourage a voluntary program may lead to some compulsory form of medical supervision. Your reference committee therefore recommends that such an agency be set up in accordance with the recommendations of the Council. The Procurement and Assignment Service has a part to play in this industrial mobilization just as it does in military mobilization, and the Council is cooperating fully with that agency. This agency also may serve as a source of information to employers needing medical personnel. The Council reports further progress on a Dictionary of Industrial Health which is a compilation and standardization of nomenclature of industrial health. Steps have been taken by the Council to help remedy the deficiency in industrial medical education, particularly in undergraduate teaching. Health education has been recognized as a proper function of industrial practice. Attention is invited to the necessity of improving the character of the membership in cooperating committees on industrial health in state societies and down into the county societies. The sections of the Scientific Assembly have also contributed help in various problems through the creation of advisory committees. Cooperation has been intimate with the other agencies of the American Medical Association in the preparation of reports and in the development of industrial

health activities. Interest has been maintained in industrial nursing, and there are prospects of the promotion of the professional status of the industrial nurse under proper supervision. The Council is also cooperating with lay agencies in investigating and arranging for appraising established industrial medical services. The Council is also preparing an outline of principles for use in preemployment and periodic physical examinations. Occupational disease reporting is important if progress is to be made. State societies can assist in making possible the collection of such statistics. The Council has in the formation stage a program for clarifying the atmosphere on workmen's compensation and the publishing of useful data which will be of value not only to physicians but to others concerned with the subject. A committee has been appointed to carry out this program. All these actions of the Council should, in the opinion of your reference committee, be approved by the House and the various studies and programs should be continued. Aside from the work connected with actual war medicine, there is no factor which will contribute so much to the war effort as industrial health.

17. Bureau of Medical Economics: While matters pertaining to the war were referred to another committee, we cannot discuss the Bureau of Medical Economics without considering the war, as most of its activities for the past year were in the field of medical preparedness. The survey of medical personnel made by the Bureau was a marvelous piece of work. Nothing equal to it has ever been accomplished before. Despite the excellent work of the Bureau, the work could not have been done so completely and thoroughly without the wholehearted cooperation of state and county societies, to all of which the Association owes thanks. Thanks are also due to the Army and Navy for their complete cooperation. Continuous revision of the census keeps it up to date. Various special lists have been compiled of practically all necessary and useful classifications of physicians. Such lists are of inestimable benefit to the Procurement and Assignment Service. The latter service was created in October 1941, and a consultant office was established in Chicago with the head of the Bureau of Medical Economics, Dr. Leland, as supervisor. This has all been a tremendous amount of work, reflecting great credit on the Bureau of Medical Economics and, in the opinion of your reference committee, the medical profession is greatly in the Bureau's debt. The Bureau has also compiled an index and digest of official actions of the House of Delegates, which will be a continuing publication and will be most useful to every one concerned with the work of organized medicine, and in particular to future reference committees of this House. The work of the Bureau of Medical Economics with reference to medical service plans and the program of the Farm Security Administration will form the subject of a supplemental report by your reference committee.

18. Bureau of Investigation: This Bureau continues to be a most useful factor in the educational activities of the Association. Ten thousand inquiries were submitted to the Bureau during the past year, which gives an idea of the magnitude of the work. The Bureau is being used in an ever increasing way by teachers, news agencies and Better Business Bureaus. It has also cooperated with government agencies.

19. Bureau of Exhibits: There is no question that the Scientific Exhibit at the Cleveland session was the finest on record, and great credit is due the Bureau for it. Exhibits are also available for loan purposes and are increasing in number and educational value. Health exhibits are being lent to museums and assist in health education. Motion pictures are also available for loan.

20. Committee on American Health Resorts: The committee has prepared rules for the listing of acceptable health resorts which have been approved by the Board of Trustees. These rules are carefully drawn and will doubtless prove of value in classifying health resorts and protecting the public against unwarranted therapeutic claims and against institutions with inadequate or improper medical supervision.

21. Committee to Study Air Conditioning: The committee is continually appraising developments and publications relative to air conditioning and public health. It has compiled a large amount of information which is available on request, and occasional publications are issued. The work of the committee should be continued.

22. Proposed Committee to Confer with the Specialty Boards: Because of constantly changing conditions due to the war and changes going on in the specialty boards, the Board of Trustees decided that now was an inexpedient time to appoint committees suggested a year ago. Approval of the action of the Board of Trustees is recommended by the reference committee.

Respectfully submitted,

LOUIS H. BAUER, Chairman.
A. R. MCCOMAS.
J. F. HASSIG.
WILLIAM R. MOLONY SR.
PARKE G. SMITH.

Report of Reference Committee on Miscellaneous Business

Dr. Charles G. Strickland, Chairman, presented the following report, which on motions of Dr. Strickland, duly seconded and carried, was adopted section by section and as a whole:

1. Resolution on Preserving Progressive Technics in Medical Practice: This resolution was given a new title in a committee conference with Dr. Cary, and certain paragraphs in the preamble were eliminated in the interests of clarity. With these changes your committee recommends the passage of the resolution, which now reads as follows:

POSTWAR MEDICAL PLANNING

WHEREAS, The conditions under which physicians have been able to function in the United States provide the factor most nearly responsible for the relatively enviable position which medicine now occupies and which is enabling organized medicine to provide the personnel and professional competence that represent an essential, even vital, contribution to the war effort; and,

WHEREAS, It is a chief responsibility of the profession to do its utmost to continue progressive methods in medical service which will provide opportunity for those physicians who are called to military service to reenter private practice under conditions which will insure continued progress and maximum effectiveness in civilian service; therefore be it

Resolved, That we, the House of Delegates of the American Medical Association, place ourselves officially on record as recognizing our responsibility for making the utmost effort to preserve the elements of independence and freedom of action that will make possible the easy reentry of physicians to civilian practice. To this end we recommend that a definite part of each program of every component member medical society be devoted to a reconsideration of the traditions, the standards, the freedoms and the effects of the absence of restraints and outside controls which have contributed so materially to American medicine's unequaled progress and vast achievements.

2. Resolution Requesting Approval of Principles of American College of Apothecaries: Your reference committee sympathizes with and approves of the high ideals mentioned in the preamble of this resolution requesting endorsement of the American College of Apothecaries and it deplores the encroachment of commercialism on the old line pharmacy. It is, however, unable to recommend the passage of the suggested resolution, which to a certain extent commits the American Medical Association as sponsors of an organization outside our immediate profession.

3. Resolutions on Hospital Corporations Engaging in Practice of Medicine: While these resolutions were given careful consideration, your reference committee was informed by Dr. E. H. Skinner, Section on Radiology, that somewhat similar resolutions would be introduced today by the California delegation. Dr. Skinner asked us to defer action and to consider the resolutions together.

4. Resolution on Tribute to Physicians and Surgeons of Honolulu County Medical Society: Your reference committee recommends the resolution for approval.

5. Resolutions on Elimination of Requirement of Certification of Checks for Purchase of Special Tax Stamps in Connection with Dispensing of Opium: Your reference committee recommends these resolutions to the House of Delegates for approval.

6. Resolutions Requesting Change in By-Laws Limiting Time for Introduction of New Business in House of Delegates: Your reference committee believes that the present methods of handling new business are fair and equitable. It does not believe the suggested change with the requirements that resolutions shall be filed with the Secretary sixty days in advance

of the annual session is feasible or desirable. It might mention that several state societies hold their annual sessions less than sixty days before the American Medical Association session and it recommends the defeat of these resolutions.

7. Resolutions on Standards for Percentage Determination of Hearing Loss: On page 69 of the American Medical Association Handbook your reference committee notes that the Council on Physical Therapy reports progress on this subject and promises a definite report in the near future. No data were furnished that this final report had been made. The standing of the Council on Physical Therapy, however, is such that your reference committee unhesitatingly recommends the approval of the standards set when, as and if set.

Respectfully submitted,

CHARLES G. STRICKLAND, Chairman.
JOHN T. DONOVAN.
H. C. MACATEE.
ANDREW F. MCBRIDE.
J. H. FITZGIBBON.

Report of Reference Committee on Legislation and Public Relations

Dr. E. S. Hamilton, Chairman, presented the following report, which was adopted section by section and as a whole on motions of Dr. Hamilton, duly seconded and carried:

1. Resolution on Aid to Our Government: Your reference committee recommends that this resolution be passed.

2. Report of Board of Trustees Relative to Meetings with Hospital Associations: Your reference committee recommends that the request of the Board of Trustees for additional opportunity for the Bureau of Medical Economics to study this problem be granted.

3. Resolution on Appreciation to Broadcasting Companies: Your reference committee recommends that this resolution be adopted.

4. Report of Bureau of Legal Medicine and Legislation: Your reference committee wishes to commend most heartily the report of the Bureau of Legal Medicine and Legislation in content, showing, as it does, a large amount of study and statistical work with regard to legislation all over the United States. It especially commends that portion of the report which concerns the safeguarding of accounts of deceased physicians from excessive taxation. It also commends the continued vigilance with regard to attempts to extend the scope of activity of nonmedical practitioners in the various states of the nation. It is not in sympathy with the use of osteopaths as interns in Army hospitals and commends the War Department for the opposition to such legislation. It commends the bringing to the attention of the medical profession the proposed broadening of the base of the Social Security Act to include employees now excluded and to grant additional benefits of employees now covered by the act, as this appears to be an encroachment of socialized medicine, and it recommends the adoption of the report as presented by the Bureau of Legal Medicine and Legislation.

Respectfully submitted,

E. S. HAMILTON, Chairman.
DON F. CAMERON.
STEPHEN E. GAVIN.
HENRY A. LUCE.
CARL R. STEINKE.

Report of Reference Committee on Hygiene and Public Health

Dr. Felix J. Underwood, Chairman, presented the following report, which was adopted on motion of Dr. Underwood, seconded by Dr. A. T. McCormack, Kentucky, and carried:

Resolution on Control of Venereal Disease: Your reference committee is completely in accord with the provisions of this resolution and recommends its adoption. It is inconceivable that any reputable physician should so degrade his profession and himself as to issue certificates to prostitutes to the effect that they are free from venereal disease. This is a baneful practice which encourages the maintenance of vice and may do incalculable damage by giving false assurance of safety and lead to an appreciable increase in venereal disease. Moreover, it tends to nullify the efforts of the duly constituted authorities, federal, state and local, to deal with the problems of prostitution by law enforcement and other accepted methods. Your reference committee wishes only that it were gifted with the power of expression to emphasize more strongly its approval of the spirit and intent of the provisions of this resolution.

Respectfully submitted,

FELIX J. UNDERWOOD, Chairman.
W. F. DRAPER.
HOLMAN TAYLOR.
ROBERT L. ANDERSON.
F. S. CROCKETT.

NEW BUSINESS

Resolutions on Rebates

Dr. Dwight L. Wilbur, California, submitted the following resolutions, which were referred to the Reference Committee on Amendments to the Constitution and By-Laws, with which the Judicial Council will sit:

WHEREAS, The Principles of Medical Ethics of the American Medical Association in chapter III, article I, section 1, states that "The obligation assumed on entering the profession demands that he use every honorable means to uphold the dignity and honor of his vocation, to exalt its standards . . ."; and

WHEREAS, Section 5 of the same chapter and article states that "It is unprofessional to receive remuneration from patents or copyrights on surgical instruments, appliances, medicines, foods, methods or procedures. It is equally unprofessional by ownership or control of patents or copyrights either to retard or to inhibit research or to restrict the benefit to patients or to the public to be derived therefrom. It is unprofessional to accept rebates on prescriptions or appliances, or perquisites from attendants who aid in the care of patients"; and

WHEREAS, Article VI, section 4, of this chapter states that "When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, it is unethical to give or receive a commission by whatever term it may be called or by any guise or pretext whatsoever"; and

WHEREAS, Section 5 of this same article and chapter states that "It is unprofessional for a physician to dispose of his professional attainments or services to any lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit a direct profit from the fees, salary or compensation received to accrue to the lay body or individual employing him. Such a procedure is beneath the dignity of professional practice, is unfair competition with the profession at large, is harmful alike to the profession of medicine and to the welfare of the people, and is against sound public policy"; and

WHEREAS, Recent articles in magazines of wide national circulation have called attention to shady practices of secret rebates to physicians; and

WHEREAS, Commercial concerns and laboratories, by the employment of cappers and steerers and by secret rebating are largely responsible for these criticisms; and

WHEREAS, The Better Business Bureau has complained of practices in which secret rebates were offered or accepted by physicians; and

WHEREAS, The dishonest acts of a few may be reflected to the discredit of the many; now, therefore be it

Resolved, That it be declared unethical for the members of the American Medical Association or its component branches to refer patients to commercial organizations, laboratories or other physicians who advertise to the public and others than the medical profession, who employ steerers or cappers or who offer to pay rebates or commissions or in any other manner violate the Principles of Medical Ethics of the American Medical Association or its component branches; and be it further

Resolved, That any physician violating these resolutions be subject to whatever disciplinary action is deemed advisable by the county society of which he is a member.

Proposed Amendments to the By-Laws

Dr. John Andrew, Colorado, presented the following two proposed amendments to the By-Laws, which were referred to the Reference Committee on Amendments to the Constitution and By-Laws:

1. Amend chapter XII, section 6, of the By-Laws to read as follows:

SEC. 6. ASSOCIATE FELLOWS.—The following may be elected in accordance with section 5, chapter IV, to Associate Fellowship: physicians who are members of the chartered national medical societies of foreign countries adjacent to the United States; American physicians located in foreign countries and engaged in medical missionary and similar educational and philanthropic labors; dentists holding the degree of D.D.S. who are members of state or local dental societies; pharmacists who are active members of the American Pharmaceutical Association; secretaries and executive secretaries of constituent associations of component societies who are not eligible for membership as physicians, and representative teachers and students of science allied to medicine resident in the United States and not eligible to regular membership. Associate Fellows shall enjoy the same privileges as regular Fellows and shall be subject to the same conditions.

2. Amend chapter IV, section 5, of the By-Laws to read as follows:

SEC. 5. ASSOCIATE FELLOWS.—Applications for Associate Fellowship from foreign physicians, from American physicians engaged in missionary and similar labors in foreign countries and from secretaries and executive secretaries of constituent associations and component societies who are not eligible for membership as physicians must be approved by the Judicial Council; applications from dentists must be approved by the Section on Laryngology, Otology and Rhinology, from pharmacists by the Section on Pharmacology and Therapeutics, and from representative teachers and students of science allied to medicine by the officers of a section.

Resolution on Safeguarding Women in Industry

Dr. Jean Paul Pratt, Section on Obstetrics and Gynecology, presented the following resolution, which was referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, There have been repeated assertions in the press and elsewhere that American industry in its all out war effort will be obliged to depend more and more on women employees as replacements for able bodied men essential to the armed forces; and

WHEREAS, The rate of absenteeism in industry due to sickness is considerably larger for women than men; and

WHEREAS, In addition to specific health problems relating to pregnancy, menstruation, venereal disease and the proper custody of dependent small children, certain conditions of work and unhealthful exposures more seriously affect the health of women than male workers; and

WHEREAS, Various agencies in the government, in industry and in labor are greatly interested in the health as well as the legal and economic status of women workers; be it

Resolved, That the Council on Industrial Health take these matters promptly under advisement with such help as can readily be secured from the Section on Obstetrics and Gynecology, in order that the practicing profession, industrial physicians and obstetricians-gynecologists be informed about the best methods of safeguarding the physical well-being of women in industry.

Resolution Urging Civilians to Seek Medical Advice While Sufficient Doctors Remain Available

Dr. Stanley H. Osborn, Section on Preventive and Industrial Medicine and Public Health, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, It is well known that many individuals with chronic diseases of one type or another who expect to seek medical advice or who have been advised by their physicians to have treatment; and

WHEREAS, The early symptoms of many diseases are mild in character and many persons postpone seeking medical advice or the patients postpone treatment recommended by the physician; and

WHEREAS, Many thousands of physicians have gone into the armed services of the country and tens of thousands of doctors will soon be commissioned and gone to war in the future; therefore be it

Resolved, That this body recommend that all persons who expect to seek medical opinion or who have had medical or surgical care prescribed for them should seek medical advice or follow such advice while sufficient doctors remain available to the civil population.

Resolution on Message from Mr. Paul V. McNutt

Dr. Charles H. Henninger, Pennsylvania, presented the following resolution, which was referred to the Reference Committee on Military Preparedness:

WHEREAS, There has come to this House of Delegates a message directly from the chief of the War Man Power Commission, Mr. Paul V. McNutt, indicating the needs of the nation in this great emergency for the services of the physicians of our country; and

WHEREAS, The American medical profession has never failed in any previous emergency to meet the needs of the armed forces of our country for medical officers; and

WHEREAS, The Procurement and Assignment Service for Physicians, Dentists and Veterinarians was established by the President of the United States to enable the medical profession to meet all the demands placed on it to provide medical officers for all the governmental services, for industry and for our civilian population; therefore be it

Resolved, By the House of Delegates of the American Medical Association than we tender to Mr. Paul V. McNutt our appreciation of his message and of his cooperation; that we pledge to the President of the United States, to the War Man Power Commission, and to the Procurement and Assignment Service every aid that this organization can possibly render in meeting this objective, and that the Board of Trustees and the War Participation Committee of the American Medical Association be requested to give consideration to all of the means by which these objectives may be attained.

Resolutions on Improvement of Relations Between Physicians and Insurance Companies

Dr. Lyell C. Kinney, California, presented the following resolutions, which were referred to the Reference Committee on Legislation and Public Relations meeting jointly with the Reference Committee on Miscellaneous Business:

WHEREAS, It is desirable that physicians and insurance companies cooperate to the fullest extent, especially in the interest of persons covered by health and accident insurance; and

WHEREAS, A serious situation has arisen in the administration of certain health and hospitalization schemes whereby medical services are being billed under the term "hospital services" and are being paid for by insurance companies as they are labeled hospital services; and

WHEREAS, The continuation or extension of such practices will inevitably lead to the inclusion of any type of medical service under the label "hospital service," at the convenience of the corporations involved and to the detriment of medical care; now therefore be it

Resolved, That the House of Delegates of the American Medical Association hereby requests insurance companies to cooperate with the organized medical profession to the end that hospitalization policies shall include only hospital benefits. If the inclusion of indemnification for medical services, such as surgery or radiology, is desired, then payment of such shall be made only on receipt of certified statement from a physician that he has rendered such. Fees for medical services should be paid to physicians via indemnity to the assured, or by check payable jointly to assured and physician. This practice should be maintained irrespective of whether a hospital chooses to bill for medical services as a part of its hospital bill; and be it further

Resolved, That the House of Delegates of the American Medical Association requests hospitals and physicians to cooperate with it in this important step, by seeing that bills for hospital and medical services are clearly distinguished; the latter should bear the name of the physician rendering the service to indicate clearly that the charge is for medical service.

Resolutions on a Program for Refresher Training in General Clinical Medicine

Dr. B. J. Hein, Ohio, presented the following resolutions, which were referred to the Reference Committee on Medical Education:

WHEREAS, At the conclusion of hostilities many young medical officers who will return to civilian practice will need refresher training in general clinical medicine; be it

Resolved, That the Board of Trustees of the American Medical Association instruct the Council on Medical Education and Hospitals to develop a program for such training, in conjunction with the various medical schools and constituent state medical societies; and be it

Resolved, That the Board of Trustees confer with the proper government authorities as to the possibilities of granting a furlough with full pay and allowance to medical officers desiring to take advantage of such refresher courses.

Dr. R. W. Fouts, Vice Speaker, at the request of the Speaker read a report of the Reference Committee on Reports of Officers at the 1930 annual session dealing with Executive Sessions of the House.

The meeting recessed at 12:25 p. m.

Tuesday Afternoon, June 9

The House of Delegates was called to order by the Speaker at 2 o'clock.

On motion of Dr. Walter E. Vest, West Virginia, duly seconded and carried, attendance at the Executive Session was granted to members of the House of Delegates, alternate members of the House of Delegates, officers, Trustees and persons allied to the administrative affairs of the American Medical Association, presidents, secretaries, executive secretaries, chairmen of councils and editors of constituent state and territorial medical associations, secretaries and executive secretaries of component county medical societies, the secretary of the Southern Medical Association, the secretary of the American College of Physicians, Dr. Benvenuto R. Diño of the Philippine Islands, visitors from the Army and Navy, and Dr. Thomas Parran, Surgeon General of the United States Public Health Service.

Executive Session—Tuesday Afternoon, June 9

The Sergeants-at-Arms polled the House, after which the House went into Executive Session at 2:15, with Dr. H. H. Shoulders, Speaker, presiding.

Report of Reference Committee on Executive Session

Dr. Thomas A. McGoldrick, Chairman, presented the following report, which was adopted on motion of Dr. McGoldrick, seconded by Dr. A. T. McCormack, Kentucky, and carried:

The following resolution has been presented by title and referred to your reference committee:

RESOLUTION REQUESTING CHANGE IN SOCIAL SECURITY ACT

WHEREAS, Under the Social Security Act payments for medical care given to recipients-of-aid from the blind, old age and dependent children's divisions of the Department of Social Welfare can no longer be made to physicians directly but, instead, these payments must be made to the patient; and

WHEREAS, Experience in New York City has shown that this method of payment has worked a hardship on the physicians who have rendered medical care to these persons by forcing them to make one or more additional calls to collect their bills; and

WHEREAS, In New York City it has been proved that nearly 5 per cent of these patients have not paid their doctors for medical care rendered with the money which the State Department of Social Welfare gave them but instead have spent the money for other uses; and

WHEREAS, The New York City Department of Welfare has stated that this percentage is only a fraction of the number of patients who did not pay their physicians for medical care, as shown by the great many complaints from physicians who have telephoned to that department, rather than written letters which could be submitted in evidence; and

WHEREAS, The Medical Society of the State of New York requests the American Medical Association to take steps looking to a change; therefore be it

Resolved, That the American Medical Association consider having legislation initiated to provide a change in the Social Security Act so that persons rendering medical care to recipients-of-aid from any government agency may be paid directly by that agency.

Owing to the lack of information on this practice throughout the United States and in the absence of any reasons for approval presented to your reference committee, it recommends that the resolution itself be not approved.

Respectfully submitted,

THOMAS A. MCGOLDRICK, Chairman.
LUCIUS F. DONOHOE.
R. E. SCHLUETER.
WALTER W. KING.
LLOYD NOLAND.
E. H. CARY.
CLYDE L. CUMMER.

Report of Reference Committee on Military Preparedness

Dr. John H. O'Shea, Chairman, presented the following report:

1. Resolution on Women Physicians Obtaining Commissions in Medical Reserve Corps of United States Army and Navy: A similar resolution was presented at the 1941 session of this House. Your reference committee, in consideration of this resolution, is not unmindful of the splendid work of the eight thousand women physicians of this country. Their position in the field of medicine in America is unquestionably established. The nation is, however, now at war, with the whole responsibility for its successful prosecution resting with our armed forces. Your reference committee, after hearing discussions which included statements from representatives of both the Army and the Navy, concluded that this is a problem involving technical and administrative considerations wholly within the province of the Surgeon Generals of the Army and the Navy. Any recommendations from this body would be presumptive interference with those agencies responsible for the successful prosecution of the war. Your reference committee therefore recommends that this resolution be disapproved.

2. Report of Committee on Medical Preparedness and Report of Board of Trustees Dealing with Medicine and the War: These reports were considered together. They both deal with the formation and activities of the Committee on Medical Preparedness and the development of the Procurement and Assignment Service. It is gratifying to note the present cordial relationship existing between the government and the medical profession. The report of the Committee on Medical Preparedness again demonstrates the efficiency of organization of the American Medical Association and its willingness to serve to the limits of its capacity. The response of the individual physician to the call for voluntary duty in the prosecution of the Selective Service effort reveals no depreciation of the historic spirit of our American physicians.

The Committee on Medical Preparedness concludes its report with two specific recommendations:

(*a*) The first is that, since its original objectives have been attained, this committee should be now discharged. Your reference committee recommends that this be done and that the Committee on Medical Preparedness be commended for its splendid accomplishments. The untiring efforts and personal sacrifices of the members of the Committee on Medical Preparedness deserve much greater recognition than is indicated in the all too modest tone of its report.

(*b*) The second recommendation is that a new committee be named to be known as the Committee on Participation of the Medical Profession in the War Effort. Your reference committee recommends that a committee of five members be appointed by the Speaker of the House, with the President, President-Elect, Chairman of the Board of Trustees, Secretary of the Association and the Editor of THE JOURNAL as ex officio members. Your reference committee felt however that, for purposes of brevity, some further consideration should be given to the proposed title of this committee. It submits for consideration as an alternative the name of "War Participation Committee of the American Medical Association."

Respectfully submitted,

JOHN H. O'SHEA, Chairman.
FRANCIS F. BORZELL.
WILLIAM D. JOHNSON.
S. E. THOMPSON.
GEORGE F. LULL.
HAROLD W. SMITH.
CHARLES H. PHIFER.

Dr. O'Shea moved the adoption of the first section of the report, recommending disapproval of the Resolution on Women Physicians Obtaining Commissions in Medical Reserve Corps of United States Army and Navy. The motion was seconded by Dr. Robert E. Schlueter, Missouri, and carried after discussion by Dr. Emily D. Barringer, New York.

Section 2 (*a*) of the report of the reference committee, dealing with the report of the Board of Trustees and with the report of the Committee on Medical Preparedness, was adopted on motion of Dr. O'Shea, seconded by Dr. John Z. Brown, Utah, and carried.

Dr. O'Shea moved that section 2 (*b*) of the report of the reference committee, recommending the appointment of a "War Participation Committee of the American Medical Association" be adopted, and the motion was seconded by Dr. A. T. McCormack, Kentucky, and carried.

The report of the reference committee was adopted as a whole on motion of Dr. O'Shea, seconded by Dr. William R. Brooksher, Arkansas, and carried.

Report of Reference Committee on Legislation and Public Relations

Dr. E. S. Hamilton, Chairman, read the following majority report:

Resolutions on Approval of Activities of National Physicians' Committee for the Extension of Medical Services. Your reference committee, after considerable discussion of these resolutions by several members of the Board of Trustees and by a number of others interested, believes that the following modified resolution expresses more nearly the attitude of the American Medical Association:

WHEREAS, The American physicians and the American Medical Association have been placed in a most favorable light before the American public by the activities of outside groups of individual physicians assisted by business firms, entirely independent of organized medicine; therefore be it

Recommended, That the House of Delegates of the American Medical Association hereby express gratitude and deep appreciation for the outstanding service rendered its members and its official organization by these groups.

Respectfully submitted,

E. S. HAMILTON, Chairman.
DON F. CAMERON.
CARL R. STEINKE.

Dr. H. A. Luce, Michigan, presented the following minority report on these resolutions:

This minority report is an unqualified endorsement of the resolutions as introduced.

Respectfully submitted,

HENRY A. LUCE.
STEPHEN E. GAVIN.

Dr. Hamilton moved the adoption of the majority report of the reference committee, and the motion was seconded by Dr. A. T. McCormack, Kentucky.

Dr. Luce moved the adoption of the minority report of the reference committee, and the motion was seconded by Dr. Clarence G. Bandler, New York, and there was discussion by Drs. Thomas A. McGoldrick, New York; Francis J. Savage, Minnesota; E. H. Cary and Holman Taylor, Texas; E. S. Hamilton, Illinois; R. W. Fouts, Vice Speaker; Roger I. Lee, Acting Chairman of the Board of Trustees; Henry C. Macatee, District of Columbia; James R. Bloss, member of the Board of Trustees; Charles Gordon Heyd, member of the Council on Medical Education and Hospitals; J. Newton Hunsberger, Pennsylvania; Carl R. Steinke, Ohio, and Louis H. Bauer, New York.

The minority report was approved.

On motion of Dr. William R. Brooksher, Arkansas, seconded by Dr. Thomas A. McGoldrick, New York, and carried, the House rose from executive session at 3:30 p. m.

Tuesday Afternoon—Continued

The House reconvened in regular session at 3:30 p. m. with Dr. H. H. Shoulders, Speaker, presiding.

Presentation and Address of Dr. Benvenuto R. Diño

The Secretary presented Dr. Benvenuto R. Diño of the Philippine Islands, who addressed the House as follows:

Mr. Speaker, Officers and Members of the House of Delegates: I appreciate this kind generosity that you have shown toward me, a humble member of the medical profession of the Philippines. It is a great honor to be presented before this distinguished audience, the cream and the flower of American medicine. I do not feel that you are giving this honor to me personally, but I do feel that this is another evidence of your recognition of the gallant stand taken by the Filipino people, soldiers and civilians and physicians alike, side by side with their American comrades in the preservation of American ideals, the American way of life in our defense of that great American flag.

Mr. Speaker, you know the conditions prevailing now in my country. The Philippine Medical Association could not send delegates to this convention. I am of the conviction, however, that I voice the sentiments of my colleagues in the Philippines when I say right here and now that we are grateful to the American Medical Association, that we will always remember those American pioneer physicians who have introduced hygiene, sanitation, public health in my country, those American pioneer physicians responsible for our medical education. We are grateful to the government and to the people of America for praising the words of His Excellency, President Manuel Quezon of the Philippines, in his address before the House of Representatives last week: "No amount of suffering, destruction and even death can lessen our unflinching loyalty, can lessen our unswerving faith in America." Thank you.

Presentation of Dr. Ludvig Hektoen

The Speaker presented to the House Dr. Ludvig Hektoen, Chicago, recipient of the Distinguished Service Award, who said:

Mr. Speaker and Gentlemen: Just a word of deep, heartfelt personal thanks for the great honor you have shown me. Thank you.

The House recessed at 3:45 p. m., to reconvene on Thursday, June 11, at 1 p. m.

Third Meeting—Thursday Afternoon, June 11

The House of Delegates was called to order at 1:10 p. m. by the Speaker, Dr. H. H. Shoulders.

Report of Reference Committee on Credentials

Dr. J. Newton Hunsberger, Chairman, stated that a total of 163 delegates had been seated.

Roll Call

The Secretary called the roll and announced that more than a quorum had responded.

Presentation of Minutes

On motion of Dr. William R. Brooksher, Arkansas, seconded by Dr. A. T. McCormack, Kentucky, and carried, the House dispensed with the reading of the minutes.

Report of Reference Committee on Sections and Section Work

Dr. A. T. McCormack, Chairman, presented the following report, which was adopted on motion of Dr. McCormack, seconded by Dr. Walter B. Martin, Virginia, and carried after discussion, but the introduction of the proposed amendment to the Constitution contained in the report lies over until next year:

The Report of the Judicial Council on the Reapportionment of Delegates: Your reference committee has carefully considered this report and has instructed its chairman to offer an amendment to the Constitution, article 5, section 2, that delegates elected by the sections of the Scientific Assembly be ex officio delegates without the right to vote.

Since it is necessary for this amendment to lie over until the next annual session, your reference committee also recommends the adoption of the second or alternative recommendation of the Judicial Council that, because of the number of members of the Association now in government service and therefore unlikely to wield influence on their representatives in this House of Delegates, the reapportionment in 1943 be made under the present constitutional provisions.

Respectfully submitted,

A. T. McCormack, Chairman.
L. G. Christian.
Olin H. Weaver.
B. F. Cook.
Arthur J. Bedell.

Report of Reference Committee on Medical Education

Dr. Walter G. Phippen, Chairman, presented the following report, which was adopted section by section and as a whole on motions of Dr. Phippen, duly seconded and carried:

1. Resolutions on a Program for Refresher Training in General Clinical Medicine: (*a*) Your reference committee has considered these resolutions, hearing members of the Ohio delegation and members of the Council on Medical Education and Hospitals in support of them. Your reference committee feels strongly that there will surely develop a need for refresher courses for physicians returning to civilian practice, particularly among the younger group who enter military service soon after their intern training. It is evident that medicine will make many advances while these men are serving with the armed forces, and it seems only just that these physicians be given the opportunity before they reenter civilian practice to bring themselves abreast of the times. Therefore your reference committee recommends that the House of Delegates instruct the Council on Medical Education and Hospitals to develop a program of refresher courses for physicians returning to civilian practice after the war. In arranging such a program, consideration should be given to cooperation with medical schools, approved hospitals and medical societies.

(*b*) Your reference committee also recommends that the Board of Trustees confer with the proper government authorities as to the possibility of granting a furlough with full pay and allowances to such physicians returning to civilian practice after the war as may desire to take advantage of such refresher courses.

Respectfully submitted,

Walter G. Phippen, Chairman.
James R. Miller.
Edward H. Skinner.
L. J. Menville.
A. W. Adson.

Report of Reference Committee on Legislation and Public Relations

Dr. E. S. Hamilton, Chairman, presented the following report, which on motions by Dr. Hamilton, duly seconded and carried, was adopted section by section and as a whole:

1. Resolution on Medical Service Plans: Your reference committee calls attention to an apparent inaccuracy in the final paragraph in which the statement "at the behest of the parent

organization" is made. It recommends that the following resolution be adopted at this time in substitution of the original resolution:

Resolved, That the House of Delegates of the American Medical Association approves that principle of medical service plans on a service basis when sponsored by a constituent state medical association or a component county medical society in accordance with the recommendations relative to medical service plans adopted by the House of Delegates.

Respectfully submitted,

E. S. HAMILTON, Chairman.
DON F. CAMERON.
STEPHEN E. GAVIN.
HENRY A. LUCE.
CARL R. STEINKE.

2. Resolutions on Hospital Corporations Engaging in Practice of Medicine: The joint committee consisting of the Reference Committee on Miscellaneous Business and the Reference Committee on Legislation and Public Relations feels with respect to the resolutions that they introduce no new principles not already accepted by this House at former sessions and ask only definite clarification and study by the Board of Trustees. Your joint committee recommends the adoption of these resolutions.

3. Resolutions on Improvement of Relations Between Physicians and Insurance Companies: In regard to these resolutions, your joint committee feels that they involve many additional technicalities and require prolonged and delicate negotiations with insurance carriers which will be time consuming and difficult of attainment. So before committing our organization definitely to the line of action which these resolutions demand, your joint committee recommends that the resolutions be referred to the Board of Trustees for study by itself and the Bureau of Medical Economics as to the facts, feasibility of action requested and as to ways and means of accomplishing the desired results. Your joint committee does not at the present time recommend the passage of these resolutions in their present form.

Respectfully submitted,

REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS.
CHARLES G. STRICKLAND, Chairman.
JOHN T. DONOVAN.
H. C. MACATEE.
ANDREW F. MCBRIDE.
JOHN H. FITZGIBBON.

REFERENCE COMMITTEE ON LEGISLATION AND PUBLIC RELATIONS.
E. S. HAMILTON, Chairman.
DON F. CAMERON.
STEPHEN E. GAVIN.
HENRY A. LUCE.
CARL R. STEINKE.

4. Resolution on Adequate Medical Care: During the discussion of this resolution it was suggested by the officers of the Medical Society of New Jersey that the enabling portion of the resolution be amended to read:

Resolved, That the American Medical Association encourage and assist in the development of mechanics by county and state medical societies for the purpose of providing medical care for low wage groups, for the destitute and for any other groups needing assistance in obtaining medical care; and further be it

Resolved, That efforts be made by the several state medical societies to procure enabling legislation, whereby such mechanisms can be empowered to administer for government or other responsible agencies the medical care needed by clients of governmental agencies or persons who are adjudged unable to provide such medical care for themselves.

Your reference committee wishes to commend the Medical Society of New Jersey for its laudable efforts to provide medical care for low income groups, but, as far as developing a plan or fostering legislation by the parent organization is concerned, it has been the considered judgment on many previous occasions that plans should originate in local communities, since they have separate and distinct problems and needs. It, therefore, disapproves of this resolution.

Respectfully submitted,

E. S. HAMILTON, Chairman.
DON F. CAMERON.
STEPHEN E. GAVIN.
HENRY A. LUCE.
CARL R. STEINKE.

Report of Reference Committee on Hygiene and Public Health

Dr. Felix J. Underwood, Chairman, presented the following report, which on motions of Dr. Underwood, duly seconded and carried, was adopted section by section and as a whole:

1. Resolution on Safeguarding Women in Industry: Your reference committee has given careful consideration to this resolution and has changed somewhat the phraseology of the body of the resolution. The intent remains the same but it is the belief of the committee that the objective will be better served if a change is made. Your reference committee proposes that the resolution be changed to read as follows:

Resolved, That the Council on Industrial Health be requested to give its immediate consideration to the preparation of a directional and informative pamphlet for the guidance of physicians and allied workers concerned with the health and well being of girls and women engaged particularly in the rapidly developing war industries. This might include the steps for taking histories and for standardized examinations of female workers with special reference to their mental and physical status. In the preparation of this pamphlet, the various sections of the American Medical Association could be called on for material recommendations if found desirable.

2. Resolution Urging Civilians to Seek Medical Advice While Sufficient Doctors Remain Available: Your reference committee has given careful consideration to this resolution and is of the opinion that it would be a wise and timely action. Certain it is that as time goes on the attention of remaining physicians will have to be devoted more and more to acute and emergency cases. The sooner that persons with chronic ailments which they intend to have corrected apply for advice or treatment, the better the chances will be of receiving the attention desired.

Respectfully submitted,

FELIX J. UNDERWOOD, Chairman.
ROBERT L. ANDERSON.
F. S. CROCKETT.
W. F. DRAPER.
HOLMAN TAYLOR.

Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. Walter E. Vest, Chairman, presented the following report, which was adopted section by section and as a whole on motions of Dr. Vest, duly seconded and carried:

1. Proposed Amendments to By-Laws re Associate Fellowships: Your reference committee has carefully considered the proposed amendments to the By-Laws providing for the election of lay secretaries and executive secretaries of constituent associations or component societies to Associate Fellowship. It recognizes fully the worth of these lay secretaries to the individual organizations they serve and to organized medicine generally. Your reference committee feels further that these men and women are to be congratulated on the excellent work they are doing. The profession generally should thank them for their loyalty, their service and their accomplishments in behalf of the organized profession. It is the opinion of your reference committee, however, that such an amendment would serve no useful purpose. Those eligible under such an amendment already are allowed all the rights and privileges pertaining to Associate Fellowship and even more in that they are permitted to remain in executive sessions of the House of Delegates. It is the belief of your reference committee that a lay secretary might be at times in a less strategic position to serve his organization by such member relationship than otherwise would be the case. Moreover, careful study of chapter IV, section 5, of the By-Laws convinces your reference committee that the House of Delegates in providing for Associate Fellowship did so only on the basis of scientific attainment. It is therefore the recommendation of your reference committee that the proposed amendments be not adopted. Your reference committee does recommend, however, that chapter IV, section 5, of the By-Laws be amended so that the words "Section on Pharmacology and Therapeutics" read "Section on Experimental Medicine and Therapeutics" to conform to the present title of that section.

2. Resolutions on Rebates: Your reference committee has given very serious consideration to these resolutions. It is the

opinion of your reference committee that the practices referred to in the resolutions are beneath the dignity of a learned profession, are basically dishonest and are a violation of the Principles of Medical Ethics. Your reference committee therefore recommends that the following substitute resolutions be adopted:

WHEREAS, It has been brought to the attention of the House of Delegates that the unscrupulous practice of rebates to physicians is being engaged in by various commercial organizations, laboratories, supply houses and in some professional relationships between certain physicians; and

WHEREAS, All such practices are clearly in violation of the Principles of Medical Ethics; therefore be it

Resolved, That the House of Delegates of the American Medical Association express stern disapproval of the practice by any of the members of its component societies of referring patients to commercial organizations, laboratories or other physicians who advertise to the public and others than the medical profession, who employ so-called steerers or cappers or who pay, or offer to pay, rebates or commissions in any guise whatsoever, or who in any other manner violate the Principles of Medical Ethics of the American Medical Association; and be it further

Resolved, That any member violating these resolutions be subject to such disciplinary action as is deemed advisable by the county society in which such physician holds membership; and be it further

Resolved, That the Secretary of the American Medical Association be instructed to send a copy of these resolutions to each state and county society accompanied by a letter to the secretary of each setting forth that all such unethical practices are disreputable and unscrupulous and, if not controlled, may soon besmirch the reputation of the entire medical profession.

Respectfully submitted,

WALTER E. VEST, Chairman.
WALTER F. DONALDSON.
KARL S. J. HOHLEN.
EDWARD M. PALLETTE SR.
WILLIAM WESTON.

Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. Louis H. Bauer, Chairman, presented the following report, which was adopted section by section and as a whole on motions of Dr. Bauer, duly seconded and carried after discussion:

1. Report of Bureau of Medical Economics in Report of Board of Trustees: Two activities of the Bureau of Medical Economics in which no comment was made in the general report of your reference committee have been held over for further discussion, and the report follows. These activities are those listed as Medical Service Plans and the program of the Farm Security Administration.

(*a*) Medical Service Plans: A recommendation was made a year ago that the Bureau establish some method of coordination and interchange of material pertinent to the administration of prepayment plans for medical care sponsored by medical societies. The Bureau began a study of such plans, and data are coming in. It is contemplated that the Bureau will become a clearing house for factual data pertaining to the whole subject which will be available to all state and county medical societies.

It might be well at this point to review briefly the principles already adopted by the House of Delegates in 1938: 1. Hospital service insurance was approved in principle. It was felt that these plans should confine themselves to provision of hospital facilities and should not include any type of medical care. 2. It was recognized that health needs are not identical in different localities but depend on local conditions and, therefore, are local problems. 3. Cash indemnity insurance plans were considered practicable of development in order to cover in whole or in part the costs of emergency or prolonged illness. Such plans were also to have approval of the county and state medical societies of their respective areas. 4. A stand was reiterated against any system of compulsory health insurance. 5. A conviction was expressed that voluntary indemnity insurance may assist many income groups to finance their sickness costs without subsidy. It was further stated that development of group hospitalization and establishment of insurance plans on the indemnity principle to cover the cost of illness would assist in the solution of these problems.

As a result of the adoption of these principles, various organizations came into being. Not only is the cash indemnity principle being used, but medical service plans, some on the so-called unit plan, have also developed. Taken as a whole, progress has been slow and disappointing. It seems to your reference committee that there are two outstanding reasons for this. First, the public has not shown any great desire for such plans. Its attitude is often that it has always obtained medical care when and where it wanted it, and paid for it when and if it pleased—so why budget ahead for something it believes it can get anyway? The other reason is partly tied up with the first. The original idea of all such plans was to find some means of delivering good medical care to those in the economic group above indigence and below complete self sufficiency. This aim has to a large extent been lost sight of, and there has been a tendency to make the fee factor more important than the delivering of good medical care. One thing is certain, and that is that the development of sound, workable, voluntary plans will do more than anything else to avert the introduction of some compulsory plan.

The Bureau of Medical Economics feels that the principles already adopted by the House are sound and should be adhered to and that there is nothing to indicate that medical service organizations and group hospitalization cannot function separately as parallel services in communities that are sufficiently interested to support them. Your reference committee agrees in general but feels that certain modifications are advisable: 1. Reiteration should be given to the fact that the aim of all plans should be to facilitate delivery of the best medical service to those who are in the economic group below self sufficiency. 2. To help carry this out, approval should be given to the principle of medical service for the low income groups, provided the local situation warrants and the local county and state medical societies approve. 3. The part to be played by the American Medical Association should be restricted to the adoption of broad general principles and to acting as a clearing house, as already planned by the Bureau of Medical Economics. The idea that the American Medical Association can and should develop a plan on a countrywide basis is contrary to sound common sense. One of the claims we have always made in opposing state medicine is that medical control cannot be centralized. Conditions vary in different states and even in different counties in the same state. What will work in one locality is impracticable in another. Plans, therefore, should be largely local in character so far as details are concerned, and national only so far as broad general principles are concerned.

The matter of the cash allowance of $3 a day for hospitalization for those employed under the Social Security Act is not yet sufficiently definite for the House to take action on it. The matter should be referred to the Board of Trustees for appropriate action, if and when the matter becomes more definite.

(*b*) Program for Farm Security Administration: Medical care plans sponsored by the Farm Security Administration are operating in more than nine hundred counties of thirty-seven states and involve more than one hundred thousand families and more than five hundred thousand persons. The Farm Security Administration now proposes what amounts to a voluntary health insurance plan for all farm families in an average county in one or more areas and would give more complete medical care than the present Farm Security plan does, all to be worked out between the county agricultural planning committee and the county medical society. Because financial conditions have changed for the better in farm communities since the original proposition was made, it is probably less urgent now. Furthermore, it requires more study than can be given it during this meeting. Therefore your reference committee recommends that the matter be referred back to the Board of Trustees for study and such action as it deems fit.

Respectfully submitted,

LOUIS H. BAUER, Chairman.
J. F. HASSIG.
A. R. MCCOMAS.
WILLIAM R. MOLONY SR.
PARKE G. SMITH.

Presentation and Address of Miss Mary Switzer, Assistant to Mr. Paul V. McNutt

Dr. Frank H. Lahey, Past President, presented Miss Mary Switzer, assistant to Mr. Paul V. McNutt, who spoke as follows:

Dr. Lahey, Mr. Speaker: I may say that I feel that I am also part of the staff of the American Medical Association since our close working relationships with Dr. Lahey and his board have made us all feel that we are one body working for a very precious common objective.

NEW BUSINESS

Resolution Passed by the Section on Ophthalmology in 1941 Recommending Rescinding of Resolution Passed by the House of Delegates in 1935 and Resolution Passed by Section on Ophthalmology in 1942 Rescinding 1941 Resolution

Dr. Arthur J. Bedell, Section on Ophthalmology, presented the following resolutions from the section, the latter resolution rescinding the former, both being tabled by the House on motion of Dr. W. E. Kittler, Illinois, seconded by Dr. Walter E. Vest, West Virginia, and carried:

At a meeting of the Section on Ophthalmology in executive session on June 4, 1941 it was moved by Dr. A. R. Irvine and seconded by Dr. S. Judd Beach that the section recommends to the House of Delegates that the following resolutions adopted by it in 1935 be rescinded:

WHEREAS, There have been many complaints regarding the action of some ophthalmologists in giving lectures to and consulting with opticians and optometrists; and

WHEREAS, It is universally conceded that to care for the diseases and conditions of the human eye demands the unusual knowledge of a graduate physician who has been especially prepared; and

WHEREAS, The eye is an integral part of the body; and

WHEREAS, No one but a physician so trained should be permitted to diagnose, treat or prescribe for eye conditions; and

WHEREAS, Lecture, address or any other form of instruction to opticians and optometrists by ophthalmologists is not only a breach of the Principles of Medical Ethics which control our professional relationships but is also to the detriment of the ocular health of the public by giving it a false sense of security; and

WHEREAS, General health and ocular comfort depend on the best medical care; therefore be it

Resolved, That the Section on Ophthalmology of the American Medical Association declares that it is unethical for any member of the American Medical Association to give lectures or courses of instruction or to consult with any one not associated with the actual medical service; and be it further

Resolved, That the House of Delegates of the American Medical Association be asked to make a ruling to this effect.

At a meeting of the Section on Ophthalmology in executive session, June 10, 1942 the following resolution was presented by Dr. Parker Heath and seconded by Dr. Charles A. Bahn:

Resolved, That the Section on Ophthalmology instructs its delegate to the House of Delegates of the American Medical Association that it wishes to rescind the resolution of 1941.

Report of Reference Committee on Military Preparedness

Dr. John H. O'Shea, Chairman, presented the following report, which was adopted on motion of Dr. O'Shea, seconded by Dr. William R. Brooksher, Arkansas, and carried:

Resolution on Message from Mr. Paul V. McNutt: Your reference committee recommends approval of this resolution and that it be referred to the newly created War Participation Committee of the American Medical Association for continued action.

Respectfully submitted,

JOHN H. O'SHEA, Chairman.
FRANCIS F. BORZELL.
WILLIAM D. JOHNSON.
S. E. THOMPSON.
GEORGE F. LULL.
HAROLD W. SMITH.
CHARLES H. PHIFER.

Resolution from Section on Preventive and Industrial Medicine and Public Health on Civilian Health Protection in War

Dr. Stanley H. Osborn, Section on Preventive and Industrial Medicine and Public Health, presented the following resolution, which was adopted on motion of Dr. Osborn, seconded by Dr. George Blumer, Connecticut, and carried:

WHEREAS, A major inadequacy in the civilian health protection in war as in peace time continues from the failure of many states and of not less than half the counties in the states to provide even minimum necessary sanitary and other preventive services for health, by full time professionally trained medical and auxiliary personnel on a merit system basis supported by adequate tax funds from local and state and where necessary from federal sources; therefore be it

Resolved, That the Trustees of the American Medical Association be urged to use all appropriate resources and influences of the Association to the end that, at the earliest possible date, complete coverage of the nation's area and population by local, county, district or regional full time modern health services be achieved.

Requests for Unanimous Consent to Introduce Resolutions

RESOLUTION DEALING WITH SCHOOLS OF OPTOMETRY

Dr. A. T. McCormack, Kentucky, requested unanimous consent to introduce a resolution dealing with schools of optometry, which was not granted.

RESOLUTION DEALING WITH THE STATUS OF WOMEN PHYSICIANS IN REGARD TO THE WAR

Dr. Emily D. Barringer, New York, received unanimous consent for the introduction of the following resolution:

WHEREAS, At a public meeting last evening, called for the purpose of informing women physicians what part they might play in war activities, the fact was disclosed that there is little accurate information as to what the women physicians of the United States have done, to date, in medical preparedness for war service; and

WHEREAS, The American Medical Women's Association started about two years ago an intensive study of women physicians available for war service, and during the past summer a coast to coast personal canvass was carried on by the chairman of this special committee, and all of this material has been compiled, tabulated and is ready for use; and

WHEREAS, This fact has been publicized in the newspapers and press of the country and, through the courtesy of the Editor of the *New York State Journal of Medicine,* a series of letters has been published relative to the problems of war time service for women physicians; and

WHEREAS, The American Medical Association has not to date helped its minority group of women physicians to make use of their earnest efforts to do a patriotic job in time of great national emergency, and it has been stated in this House of Delegates during this week that military rating applies to only a small group of women physicians now ready to serve; and

WHEREAS, Governor McNutt in a recent address has stressed the urgent need of five thousand physicians by July 1; and

WHEREAS, The American Medical Women's Association is ready to produce its quota of women physicians for that date; therefore be it

Resolved, That the Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION be requested to write a sympathetic editorial on this subject and that THE JOURNAL print a full and detailed report relative to it from the American Medical Women's Association.

It was moved by Dr. Barringer that the resolution be adopted and the motion was seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, but, after discussion, was not adopted.

ELECTION OF OFFICERS

The Speaker declared the next order of business to be the election of officers.

Election of President-Elect

Dr. Olin H. Weaver, Georgia, nominated for President-Elect Dr. James E. Paullin, Atlanta, Ga., and the nomination was seconded by Drs. F. S. Crockett, Indiana; Walter G. Phippen, Massachusetts; William R. Brooksher, Arkansas; H. B. Everett and E. G. Wood, Tennessee; Clyde L. Cummer, Section on Dermatology and Syphilology; James Q. Graves and Leon J. Menville, Louisiana; John Z. Brown, Utah; Stephen E. Gavin, Wisconsin; Henry A. Luce, Michigan; J. Newton Hunsberger, Pennsylvania; Thomas A. Pitts, South Carolina; S. E. Thompson and E. H. Cary, Texas; William A. Mulherin, Georgia; Andrew F. McBride, New Jersey; Thomas F. Thornton, Iowa; Marion C. Pruitt, Georgia, and the New York delega-

tion. Dr. George W. Kosmak, New York, moved that the nominations be closed, and the motion was seconded by Dr. Marion C. Pruitt, Georgia, and Dr. Robert A. Peers, California, and carried. On motion of Dr. A. T. McCormack, Kentucky, seconded by Dr. Walter G. Phippen, Massachusetts, and carried, the Secretary cast the vote of the House for Dr. James E. Paullin, Atlanta, Ga., for President-Elect of the American Medical Association and the Speaker declared Dr. Paullin so elected.

Election of Vice President

Dr. John Andrew, Colorado, nominated for Vice President Dr. John W. Amesse, Denver.

Dr. E. H. Cary, Texas, nominated for Vice President Dr. William J. Carrington, Atlantic City, N. J., and the nomination was seconded by Drs. Hilton S. Read, New Jersey, and George W. Kosmak, New York.

The Speaker, hearing no other nominations, declared the nominations closed and the tellers spread the ballot. The Secretary announced that 140 votes had been cast, of which Dr. Carrington received 75 and Dr. Amesse 65. The Speaker declared that the House had elected to serve as Vice President for the ensuing year Dr. William J. Carrington, Atlantic City, N. J., and requested the New Jersey delegation to bring Dr. Carrington to the hall to present him to the House.

Introduction and Address of Dr. James E. Paullin

Dr. A. A. Walker, Alabama, introduced to the House Dr. James E. Paullin, Atlanta, Ga., newly elected President-Elect, who addressed the House as follows:

Mr. Speaker, Gentlemen: With the deepest feeling of humility I accept from this House of Delegates the office of President-Elect of the greatest and most magnificent medical organization in the world. To have been chosen as one in whom you are willing to place this confidence fills my soul with pride and is recognized as a tribute, which, any one would agree, is the highest honor which a noble profession can bestow on one of its members.

At this particular time no one is more conscious of the numerous responsibilities which rest on the American Medical Association than I. No one realizes more than I the obligation which this organization representing a group of the best citizens of these United States has assumed and will continue to assume in an all out effort to win this war.

No one appreciates more the increasing dependence of the federal government on us for leadership, guidance and help in that field where we are best qualified to perform; and no organization is more willing to cooperate whole heartedly with the federal government in performing this duty.

It seems terribly strange and at times almost irreconcilable that a profession which has always served individuals and peoples as an effective agent in the prevention of disease, diminishing health want, curing the sick, prolonging and making more effective the declining years, and a profession which is always busily engaged both by precept and by example in teaching others to enjoy the blessings of peace, happiness and contentment should assume this role now in a greater and more powerful degree because of the inhuman, cowardly and dastardly act of two individuals who respect neither God nor man and to whom justice, wisdom and charity are unknown.

The enormousness of the task that faces us we are just beginning to realize. The citizens of our country look to us now to furnish to our boys who have made and are willing to make the supreme sacrifice to protect those who remain at home necessary medical care and rapid rehabilitation from disease and injury. The medical profession will do this and I am firmly convinced from an intimate knowledge and close association with this group of professional people over a long period of years that they will not fail. They never have failed, and my belief is that they never will fail.

I therefore, as your President-Elect, together with every other officer and employee of our Association, pledge the fullest cooperation of this, the largest, greatest, most altruistic and humanitarian group on this earth, our all out effort in this national crisis to win this war not only for our people but for all people wherever they are or whoever they may be who wish life, liberty and freedom.

To this end we ask for and beseech the help, aid and guidance of Him who said "Thou shalt have no other gods before Me." God bless you every one.

Election of Secretary

Dr. William R. Brooksher, Arkansas, nominated Dr. Olin West, Chicago, to succeed himself as Secretary of the American Medical Association, and the nomination was seconded by Drs. E. G. Wood, Tennessee, and William A. Mulherin, Georgia, and many others. Dr. Leon J. Menville, Louisiana, moved that the nominations be closed, and the motion was duly seconded and carried unanimously. Dr. Arthur J. Bedell, Section on Ophthalmology, moved that, in recognition of the service of the Secretary, the House stand and cast the ballot unanimously for Dr. West. The motion was carried by a rising vote, and the Speaker declared Dr. West elected Secretary for the ensuing year.

Election of Treasurer

Dr. James R. Bloss, Chairman, Executive Committee, Board of Trustees, in behalf of the Board of Trustees placed in nomination for Treasurer Dr. Herman L. Kretschmer, Chicago, to succeed himself. On motion of Dr. E. H. Cary, Texas, seconded by Dr. Joseph F. Smith, Wisconsin, and carried, the nomination was confirmed, and the Speaker announced that Dr. Herman L. Kretschmer, Chicago, had been elected Treasurer for the ensuing year to succeed himself.

Election of Speaker of House of Delegates

Dr. R. W. Fouts, Vice Speaker, took the Chair and stated that the next order of business was the election of a Speaker of the House of Delegates.

Dr. E. G. Wood, Tennessee, nominated Dr. H. H. Shoulders, Nashville, Tenn., to succeed himself as Speaker of the House of Delegates. The nomination was seconded by Drs. H. B. Everett, Tennessee; Andrew F. McBride, New Jersey; William R. Brooksher, Arkansas; John Z. Brown, Utah; J. Newton Hunsberger, Pennsylvania, and James Q. Graves, Louisiana. Dr. Thomas F. Thornton, Iowa, moved that the nominations be closed. The motion was seconded by Dr. William R. Brooksher, Arkansas, and carried. On motion of Dr. A. T. McCormack, Kentucky, seconded by Dr. Andrew F. McBride, New Jersey, and carried, the Secretary cast the ballot of the House for Dr. H. H. Shoulders, Nashville, Tenn., for Speaker of the House of Delegates for the ensuing year, and the Vice Speaker declared Dr. Shoulders so elected.

Election of Vice Speaker of the House of Delegates

The Speaker resumed the Chair and announced that the next order of business was the election of a Vice Speaker of the House of Delegates.

Dr. James Q. Graves, Louisiana, nominated Dr. R. W. Fouts, Omaha, to succeed himself as Vice Speaker of the House of Delegates, and the nomination was seconded by Drs. G. Henry Mundt, Illinois; Olin H. Weaver, Georgia, and Leon J. Menville, Louisiana. It was moved by Dr. William A. Mulherin, Georgia, seconded by Dr. John Z. Brown, Utah, and carried, that the nominations be closed, and the Speaker declared Dr. R. W. Fouts, Omaha, unanimously elected Vice Speaker of the House of Delegates for the ensuing year to succeed himself.

Election of Trustees

Dr. William R. Molony Sr., California, nominated for Trustee to succeed Dr. Arthur W. Booth, Elmira, N. Y., whose term has expired and who is not eligible, according to the By-Laws, for reelection, Dr. Edward M. Pallette Sr., Los Angeles, and the nomination was seconded by Drs. Charles E. Mongan, Massachusetts; William Weston, Section on Pediatrics; James M. Hayes, Minnesota; Joseph F. Smith, Wisconsin; E. S. Hamilton, Illinois; Robert L. Anderson, Pennsylvania; Hilton S. Reed, New Jersey, and E. E. Barlow, Arkansas.

Dr. Thomas A. McGoldrick, New York, placed in nomination the name of Dr. Charles Gordon Heyd, New York.

It was moved by Dr. William A. Mulherin, Georgia, seconded by Dr. L. W. Larson, Section on Pathology and Physiology, and carried, that the nominations be closed.

The tellers spread the ballot and the Secretary announced that 139 votes had been cast, of which Dr. Edward M. Pallette Sr. received 104 and Dr. Charles Gordon Heyd 35. The Speaker declared Dr. Edward M. Pallette Sr., Los Angeles, elected Trustee for a term ending in 1947 to succeed Dr. Arthur W. Booth. On motion of Dr. Thomas A. McGoldrick, New York, seconded by Drs. George W. Kosmak, New York, and Robert A. Peers, California, and carried, the vote for Dr. Pallette was made unanimous.

The Speaker announced that the next order of business was the election of a Trustee for a term of five years to succeed Dr. R. L. Sensenich, South Bend, Ind.

Dr. F. S. Crockett, Indiana, nominated Dr. R. L. Sensenich, South Bend, Ind., to succeed himself for a term of five years, and the nomination was seconded by Drs. E. S. Hamilton, Illinois; James C. Sargent, Wisconsin; William R. Brooksher, Arkansas; John Z. Brown, Utah; John H. O'Shea, Washington, and Robert E. Schlueter, Missouri. The nominations were closed on motion of Dr. A. T. McCormack, Kentucky, seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried. On motion of Dr. Andrew F. McBride, New Jersey, seconded by Dr. James C. Sargent, Wisconsin, and carried, the Secretary cast the ballot of the House for Dr. R. L. Sensenich, South Bend, Ind., to succeed himself as a Trustee for a term ending in 1947. The Speaker declared Dr. Sensenich so elected.

Nominations for Standing Committees

Nominations by Dr. Fred W. Rankin, President

Dr. Fred W. Rankin, President, submitted the following nominations for standing committees, which, on motions duly made, seconded and carried, were confirmed by the House:

Dr. Lloyd Noland, Fairfield, Ala., to succeed Dr. Holman Taylor, Fort Worth, Texas, as a member of the Judicial Council for a term ending in 1947.

Dr. Clyde L. Cummer, Cleveland, to succeed himself as a member of the Council on Scientific Assembly, for a term ending in 1947.

Dr. James E. Paullin, President-Elect, requested that he be relieved of his membership on the Council on Scientific Assembly in view of his election as President-Elect and that Dr. Rankin be allowed to appoint some one for his unexpired term. The request of Dr. Paullin was granted on motion of Dr. G. Henry Mundt, Illinois, seconded and carried.

Dr. Rankin nominated as a member of the Council on Scientific Assembly to fill the unexpired term of Dr. James E. Paullin ending in 1943 Dr. Edward L. Bortz, Philadelphia. The nomination was confirmed on motion of Dr. John Z. Brown, Utah, seconded by Dr. Olin H. Weaver, Georgia, and carried.

Nomination by the Board of Trustees

Dr. James R. Bloss, Chairman, Executive Committee, Board of Trustees, placed in nomination the name of Dr. Reginald Fitz, Boston, to succeed himself as a member of the Council on Medical Education and Hospitals for a term ending in 1949. It was moved by Dr. Arthur J. Bedell, Section on Ophthalmology, seconded by Dr. E. S. Hamilton, Illinois, and carried, that the nomination be confirmed, and Dr. Reginald Fitz, Boston, was declared elected a member of the Council on Medical Education and Hospitals for a term of seven years to succeed himself.

Election of Associate and Affiliate Fellows

The Secretary presented the following nominations for Associate and Affiliate Fellowship, properly approved according to the By-Laws, which, on motions, duly made, seconded and carried, were confirmed:

Nominations of American Medical Missionaries for Associate Fellowship Approved by the Judicial Council

Ainslie, C. A., Guatemala, C. A.
Allison, Mary Bruins, Douglaston, N. Y.
Casberg, Melvin A., Yeotmal District, India.
Horner, Marjory C., Congo, Belge, W. C., Africa.
Horner, W. Howard, Congo, Belge, W. C., Africa.
Hughlett, W. S., Cocoa, Fla.
Vroon, John, Sialkot, Punjab, India.
Wallis, Calvin P., Baguio, P. I.

Nominations for Associate Fellowships Approved by the Sections Indicated

Practice of Medicine

McLean, Franklin C., Chicago.

Laryngology, Otology and Rhinology

Fountain, Lee S., San Antonio, Texas.
Murray, Harold H., Seattle.

Experimental Medicine and Therapeutics

Flemister, L. J., Jr., Washington, D. C.
Shelanski, Herman A., Philadelphia.

Pathology and Physiology

Novak, Milan V., Chicago.

Preventive and Industrial Medicine and Public Health

Gudakunst, Don W., New York.
Lambert, Sylvester M., Walnut Creek, Calif.

Nominations for Affiliate Fellowships Approved by the Council on Scientific Assembly

Aaron, Charles D., Detroit.
Aderhold, Thomas M., El Reno, Okla.
Allen, Addie B., Los Angeles.
Allen, Charles E., Kansas City, Mo.
Allen, Charles Lewis, Los Angeles.
Andrews, R. W., Poughkeepsie, N. Y.
Bailey, Frank J., Red Bluff, Calif.
Biddle, Andrew P., Detroit.
Black, Carl E., Sr., Jacksonville, Ill.
Bonnell, C. H., Rye, N. Y.
Bowerman, Edwin A., Buffalo.
Brush, Arthur C., New York.
Burkhard, Edwin D., Homelake, Colo.
Campbell, D. M., Detroit.
Chapin, Henry Dwight, Bronxville, N. Y.
Chapman, Newton D., Port Richmond, N. Y.
Clemons, E. Jay, Los Angeles.
Cochrane, William J., Lake City, Minn.
Collie, Henry G., St. Petersburg, Fla.
Creevey, George M., New Hartford, Conn.
Cuthbertson, Hugh A., Chicago.
Dickert, John G., Englewood, N. J.
Dockstader, Charles H., Massapequa, L. I., N. Y.
Doolittle, Willard F., New York.
Enos, Clinton, Denver.
Farrar, L. K. P., New York.
Finney, J. M. T., Baltimore.
Friedenwald, Harry, Baltimore.
Frost, Edward L., Buffalo.
Frothingham, G. E., Detroit.
Gardner, William S., Baltimore.
Genung, L. T., Ithaca, N. Y.
Godfrey, Willoughby L., Battle Creek, Mich.
Grandison, W. G., Charlestown, Mass.
Haas, S. V., New York.
Hamel, Albert H., St. Louis.
Harris, Eva Lillian, Oakland, Calif.
Hastings, Hill, Los Angeles.
Hawkins, F. L., Meredith, N. H.
Heller, I. N., New York.
Heller, Joseph M., Washington, D. C.
Hill, Charles L., Nashville, Tenn.
Hirsh, A. B., New York.
Hoffman, Lawrence H., San Francisco.
Holmes, May S., Orleans, Mass.
Hopkins, C. W., Elmhurst, Ill.
Hume, Arthur M., Owosso, Mich.
Hurrell, M. Louise, Kingston, N. Y.
Jackson, Carl A., Kansas City, Mo.
Jackson, Clarence M., Minneapolis.
Jaudon, Benjamin Y., St. Louis.
Jeffers, George D., Parkersburg, W. Va.
Johnson, Arthur W., Mechanicville, N. Y.
Kahrs, W. H., New York.
Kellogg, John H., Battle Creek, Mich.
Kelly, Howard A., Baltimore.
Kirkpatrick, Joseph H., Los Angeles.
Leenhouts, A., Holland, Mich.
Littlewood, Frank B., New Rochelle, N. Y.
Lyon, I. P., Buffalo.
Macqueen, Donald K., Laurium, Mich.
Major, Hermon S., Kansas City, Mo.
Marchildon, John W., Los Angeles.
Martin, William C., Detroit.
McCray, E. H., Malvern, Ark.
McKean, James W., Long Beach, Calif.
Miner, Stanley G., Detroit.
Minnick, Edwin M., Danvers, Ill.
Morrison, James F., Brooklyn.
Myrick, H. G., Boston.
Ohle, Henry C., Baltimore.
Parker, Owen William, Ely, Minn.
Parker, Walter R., Grosse Point, Mich.
Pope, M. Y., Monticello, Ark.
Potter, Marjory J. M., La Mesa, Calif.
Potter, Will H., La Mesa, Calif.
Pratt, Charles A., New Bedford, Mass.
Renaud, George L., Detroit.
Rich, Charles O'N., Omaha.
Roberts, A. J., Jackson, Mich.
Sawbridge, Edward, Stephenson, Mich.
Seavey, Minnie A., Sacramento, Calif.
Sheller, William O., Los Angeles.
Simon, L. S., Los Angeles.
Soper, Horace W., St. Louis.
Stevens, Rollin H., Detroit.
Strickland, William R., Rock Port, Mo.
Swint, Roger C., Atlanta, Ga.
Thompson, Archibald B., Grand Rapids, Mich.
Van Doren, William, Mechanicville, N. Y.
Waddington, J. E. G., Detroit.
Wessinger, John A., Ann Arbor, Mich.
Woolsey, George, New York.
Wylie, Eugene C., Dorchester Centre, Mass.

Appointment of Members of War Participation Committee of American Medical Association

In accordance with the action of the House of Delegates, the Speaker appointed the following members of the newly created War Participation Committee of the American Medical Association: Drs. Walter F. Donaldson, Pittsburgh, Chairman; Edward R. Cunniffe, New York; Clyde L. Cummer, Cleveland; John H. O'Shea, Spokane, Wash., and William R. Molony Sr., Los Angeles. In accordance with the action of the House, the ex officio members of the Committee are the President, the President-Elect, the Chairman of the Board of Trustees, the Secretary and the Editor of THE JOURNAL of the American Medical Association.

Place of 1945 Annual Session

Dr. James R. Bloss, Chairman, Executive Committee, Board of Trustees, reported that two invitations had been received for the 1945 annual session, one from New York and the other from Atlantic City, N. J., and that the Secretary has information showing that the accommodations to be provided by each of the cities are such that a satisfactory session can be held in either of them.

Dr. Andrew F. McBride, New Jersey, invited the Association to come to Atlantic City, N. J., in 1945, and Dr. Thomas A. McGoldrick invited the Association to meet in New York in 1945.

Presentation and Address of Vice President

Dr. Hilton S. Read, New Jersey, presented the newly elected Vice President, Dr. William J. Carrington, Atlantic City, N. J., who addressed the House as follows:

Mr. Speaker and Members of the House: Let me thank you for this totally unexpected and wholly surprising honor, the greatest that has ever come to me in my life. It takes my breath away, and I have just enough breath left to say to you that I will devote a full measure of zeal and devotion and loyalty to this American Medical Association which it so richly deserves. Thank you.

Place of 1945 Annual Session (Continued)

The tellers spread the ballot and the Secretary announced that 107 votes had been cast, of which New York received 65 and Atlantic City, N. J., 42. The Speaker declared that New York had been selected as the place of annual session in 1945.

Expressions of Appreciation

It was moved by Dr. A. T. McCormack, Kentucky, that the House of Delegates of the American Medical Association express to the Medical Society of New Jersey and to the Atlantic County Medical Society, to the officials of Atlantic City and New Jersey, and to the people, its profound gratitude for the splendid hospitality that had been extended to the American Medical Association during the stay in Atlantic City; to the press of the United States for the excellent reports that had been made, and to the newly elected Vice President, Dr. Carrington, and his associates for the untiring work that all know was necessary to make this session the smooth, perfect success it has been, and to the Woman's Auxiliary of New Jersey and of Atlantic City for the beautiful hospitality they had extended. The motion was seconded by Drs. J. Newton Hunsberger, Pennsylvania, and Olin H. Weaver, Georgia, and carried unanimously.

Dr. Arthur J. Bedell, Section on Ophthalmology, moved that the Secretary stand and receive the resolution that the members of the House of Delegates desire to rise and express appreciation to the Speaker of the House for the masterful way in which he has conducted this session.

The Delegates arose and the Secretary stated that the intent of the gentleman's suggestion was carried out enthusiastically and without any opportunity to put the question, and that the Speaker might therefore consider himself thanked and appreciated.

The Speaker expressed to the members of the reference committees his high appreciation as well as that of the House for the excellent work they had done; that in many instances the job of the reference committees was an arduous one; that there were about sixty members of the reference committees out of one hundred and seventy-five in the House; that the entire membership of the House had found its way to the rooms of the reference committees, and that the excellent work done by the committees had simplified the procedure of the House. The Speaker requested the House to join with him in a little expression of appreciation to the members of the reference committees.

The House of Delegates adjourned sine die at 4:10 p. m.

REGISTRATION AT ATLANTIC CITY

The total registration at Atlantic City was 8,238. Below are summaries of the registration by sections and by states:

Registration by Sections

Practice of Medicine	2,473
Surgery, General and Abdominal	1,119
Obstetrics and Gynecology	549
Ophthalmology	429
Laryngology, Otology and Rhinology	308
Pediatrics	406
Experimental Medicine and Therapeutics	90
Pathology and Physiology	257
Nervous and Mental Diseases	185
Dermatology and Syphilology	237
Preventive and Industrial Medicine and Public Health	217
Urology	193
Orthopedic Surgery	239
Gastro-Enterology and Proctology	345
Radiology	336
Anesthesiology	138
Sessions for the General Practitioner	189
Session on Legal Medicine	9
Two or more sections or no sections marked	519
Total	8,238

Registration by States

Alabama	38	New Jersey:	
Arizona	10	Atlantic City	77
Arkansas	11	State at large	1,000
California	180	New York	1,507
Colorado	22	North Carolina	96
Connecticut	166	North Dakota	6
Delaware	45	Ohio	386
District of Columbia	220	Oklahoma	34
Florida	73	Oregon	18
Georgia	78	Pennsylvania	1,936
Idaho	4	Rhode Island	52
Illinois	357	South Carolina	31
Indiana	87	South Dakota	2
Iowa	46	Tennessee	50
Kansas	22	Texas	92
Kentucky	42	Utah	8
Louisiana	46	Vermont	16
Maine	22	Virginia	146
Maryland	244	Washington	29
Massachusetts	300	West Virginia	64
Michigan	218	Wisconsin	53
Minnesota	87	Wyoming	2
Mississippi	7	Canada	56
Missouri	92	Foreign	89
Montana	5		
Nebraska	34	Total	8,238
Nevada	1		
New Hampshire	31		

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit at the Atlantic City session was noted for its Pan American participation. Several of the proposed exhibits from Central and South America were canceled because of the difficulties of transportation; there were eighteen Pan American exhibits on the program, however, of which thirteen were eventually installed, the others being delayed or lost in transit.

The large number of Army and Navy uniforms that were seen in the Scientific Exhibit constantly attested the part which the medical profession is playing in the present emergency. Many prospective exhibitors were forced to withdraw from participation in the meeting because of war duties. Others, however, obtained leave to present their material. The U. S. Army, the U. S. Navy, the U. S. Public Health Service, the Selective Service System, the Procurement and Assignment Service and the Office of Civilian Defense all had exhibits relating to the war effort.

The Special Exhibit on Fractures was presented for the twelfth time under the auspices of a committee composed of Dr. Kellogg Speed, Chicago, chairman; Dr. Frank D. Dickson, Kansas City, Mo., and Dr. Walter Estell Lee, Philadelphia. Appreciation is expressed to Dr. James H. Mason III, Atlantic City, who served as local representative, and to Mrs. Nellie McGurran, superintendent of the Atlantic City Hospital, for their help and cooperation. Nearly fifty physicians assisted with the demonstrations in six booths continuously throughout the week, and a pamphlet describing the exhibit was distributed.

The Special Exhibit on Backache was presented for the third time under the auspices of a committee composed of Dr. Frank R. Ober, Boston, chairman; Dr. Carl E. Badgley, Ann Arbor, Mich.; Dr. J. Archer O'Reilly, St. Louis; Dr. Arthur Steindler, Iowa City, and Dr. Philip D. Wilson, New York, with the collaboration of Dr. Eben J. Carey, Milwaukee; Dr. Albert Ferguson, Brookline, Mass.; Dr. H. Close Hesseltine, Chicago; Dr. K. G. Hansson, New York; Dr. Theodore A. Willis, Cleveland, and Dr. Walter Zeit, Milwaukee, and an advisory committee consisting of Dr. Fremont A. Chandler, Chicago; Dr. H. Earle Conwell, Birmingham, Ala.; Dr. John S. Coulter, Chicago; Dr. Philip Lewin, Chicago; Dr. Robert D. Schrock, Omaha; Dr. E. Harlan Wilson, Columbus, Ohio, and Dr. Walter J. Zeiter, Cleveland. A group of fifty physicians participated throughout the week in the demonstrations, and a pamphlet describing the exhibit was distributed.

Lectures and demonstrations on poliomyelitis and diabetes were given throughout the week in two theaters adjoining the exhibits.

The Section on Practice of Medicine presented twenty-nine exhibits, including sixteen in the symposium on cardiovascular disease. Dr. Louis B. LaPlace, Philadelphia, was the section representative.

The Section on Surgery, General and Abdominal, presented twenty-eight exhibits. The section representative was Dr. Grover C. Penberthy, Detroit.

The Section on Obstetrics and Gynecology presented ten exhibits. The section representative was Dr. Charles Edwin Galloway, Evanston, Ill.

The Section on Ophthalmology had eleven exhibits. The committee from the section consisted of Dr. Georgiana Dvorak Theobald, Oak Park, Ill., chairman; Dr. Derrick Vail, Cincinnati, and Dr. W. Ivan Lillie, Philadelphia.

The Section on Laryngology, Otology and Rhinology presented six exhibits. The section representative was Dr. Fred W. Dixon, Cleveland.

The Section on Pediatrics had six exhibits. The section representative was Dr. Arthur F. Abt, Chicago.

The Section on Experimental Medicine and Therapeutics presented twenty-three exhibits. The section representative was Dr. Dwight L. Wilbur.

The Section on Pathology and Physiology presented twenty exhibits. The section representative was Dr. Frank W. Konzelmann, Philadelphia.

The Section on Nervous and Mental Diseases presented seven exhibits. The section representative was Dr. Frederick P. Moersch, Rochester, Minn.

The Section on Dermatology and Syphilology showed eleven exhibits. The section representative was Dr. Hamilton Montgomery, Rochester, Minn.

The Section on Preventive and Industrial Medicine and Public Health presented fourteen exhibits. The representative to the section was Dr. Paul A. Davis, Akron, Ohio.

The Section on Urology presented seven exhibits. The section representative was Dr. John H. Morrissey, New York.

The Section on Orthopedic Surgery presented ten exhibits. The representative to the section was Dr. Jesse T. Nicholson, Philadelphia.

The Section on Gastro-Enterology and Proctology had ten exhibits. The representative to the section was Dr. Grant H. Laing, Chicago.

The Section on Radiology presented ten exhibits. The section representative was Dr. S. W. Donaldson, Ann Arbor, Mich.

The Section on Anesthesiology presented seven exhibits. The section representative was Dr. Paul M. Wood, New York.

Seventy-eight motion pictures were shown continuously throughout the week in four theaters directly adjacent to the exhibits.

Thirty-six papers read before the sections of the Scientific Assembly were correlated with the exhibits in the Scientific Exhibit.

Acknowledgment is made to the local committee on Scientific Exhibit, of which Dr. R. A. Kilduffe was chairman.

REPORT OF THE COMMITTEE ON AWARDS

The Committee on Awards made the following report:

GROUP I

(Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.)

The GOLD MEDAL to Eben J. Carey and Leo C. Massopust, Marquette University Medical School, Milwaukee, for exhibit on Experimental Ameboid Motion of Motor End Plates.

The SILVER MEDAL to Deryl Hart and Samuel E. Upchurch, Duke University School of Medicine and Duke Hospital, Durham, N. C., for exhibit on Air Disinfection with Bactericidal Radiant Energy.

The BRONZE MEDAL to O. V. Batson, Graduate School of Medicine of the University of Pennsylvania, Philadelphia, for exhibit on the Vertebral Vein System as a Mechanism for the Spread of Metastases.

CERTIFICATES OF MERIT, Group I, are awarded to the following (alphabetically arranged):

Louis H. Barenberg, David Green, Walter Levy and Nathan Greenstein, Morrisania City Hospital, New York, for exhibit on Prevention of Contagion in Pediatric Wards with the Use of Human Serum or Plasma.

Carlos Monge and Associates from the Faculty of Medicine and National Institute of Andean Biology, Lima, Peru, for exhibit on Chronic Mountain Sickness.

Joseph F. Ross and Milan A. Chapin, Evans Memorial and Massachusetts Memorial Hospital, Boston, for exhibit illustrating the Application of Radioactive Isotopes to Medical Investigation.

Donald Slaughter and F. T. Wright, Baylor University, College of Medicine, Dallas, Texas, for exhibit on a Quantitative Pain Threshold Machine.

Howard I. Suby, Robina M. Suby, Fuller Albright and Hirsch Sulkowitch, Massachusetts General Hospital, Boston, for exhibit on Kidney Stones: (*a*) Retrograde Dissolution of Calcium Phosphate; (*b*) Determination of Chemical Composition by X-Ray Appearance.

J. Ross Veal and Roy G. Klepser, Gallinger Municipal Hospital, Washington, D. C., for exhibit illustrating the Treatment of Frostbite of the Extremities.

In addition the following exhibits are deemed worthy of Honorable Mention (alphabetically arranged):

That of Frank W. Hartman, Victor Schelling, Henry N. Harkens, Brock Brush and Kenneth W. Warren, Henry Ford Hospital, Detroit, on the Relative Value of Pectin Solution in Shock.

That of Joseph M. Hill, E. E. Muirhead and Lewis Waters, Baylor University Hospital, Dallas, Texas, on Shock Therapy.

That of Henry Minsky, Mount Sinai Hospital, New York, on the Zonular Chamber of the Eye.

That of E. A. Rovenstine, Homer W. Smith, E. M. Papper and S. E. Bradley, New York University College of Medicine, New York, on Circulatory Changes During Spinal Anesthesia.

That of Isaac Starr and A. J. Rawson, University of Pennsylvania, Philadelphia, on the Ballistocardiograph, with Records Obtained in the Common Diseases of the Heart and Circulation.

That of Max M. Strumia and John J. McGraw, Bryn Mawr Hospital, Bryn Mawr, Pa., on the Preparation and Preservation of Human Blood Plasma.

GROUP II

(*Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of excellence of presentation and correlation of facts.*)

The GOLD MEDAL to John C. Bugher and Manuel Roca-Garcia, Section of Special Studies, National Department of Health, Bogota, Colombia, for exhibit on the Epidemiology of Jungle Yellow Fever.

The SILVER MEDAL to Emanuel Libman of New York for exhibit illustrating Endocarditis and "Libman-Sack Disease."

The BRONZE MEDAL to L. M. Randall, M. C. Piper, L. A. Brunsting and M. B. Dockerty, Mayo Clinic, Rochester, Minn., for exhibit on Kraurosis and Allied Lesions of the Vulva and Certain Neoplasms of the Ovary.

CERTIFICATES OF MERIT, Group II, are awarded to the following (alphabetically arranged):

Charles S. Capp and Martha Mottram, University of California Hospital, San Francisco, for exhibit on Bone Lesions Involving the Sacrum.

William Dameshek, Tibor J. Greenwalt, Russell J. Tat and Camille Dreyfus, J. H. Pratt Diagnostic Hospital and Boston Dispensary, Boston, for exhibit on the Hemolytic Syndromes Hemoglobinurias, Hereditary and Acquired Hemolytic Anemias.

William Dressler, Israel Zion Hospital, Brooklyn, and the Brooklyn Hospital, New York, for exhibit on the Cardiac Topography and Physical Diagnosis of the Heart.

Carl F. Jordan and Irving H. Borts, Iowa State Department of Health, Des Moines, Iowa, for exhibit on Brucellosis or Undulant (Malta) Fever.

Irwin Schulz, Milwaukee Children's Hospital, Milwaukee, for exhibit on Wringer Injury.

Frederick Steigmann, Hans Popper and Karl A. Meyer, Cook County Hospital, University of Illinois College of Medicine and Cook County Graduate School of Medicine, Chicago, for exhibit on Liver Function in Clinical Medicine.

In addition, the following exhibits are deemed worthy of Honorable Mention (alphabetically arranged):

That of Thomas N. Horan and C. Graham Eddy, Eloise Hospital and Harper Hospital, Detroit, on Laparascopy: Intra-Abdominal Photography in color.

That of Elmer H. Loughlin, Richard H. Bennett, Samuel H. Spitz and William W. Carty with the assistance of Mary E. Flanagan, Long Island College Hospital, Brooklyn, on Pneumonia.

That of L. H. Mousel, H. W. Schmidt and A. H. Bulbulian, Mayo Clinic, Rochester, Minn., on Causes, Prevention and Treatment of Postoperative Atelectasis.

That of Don Carlos Peete, University of Kansas Medical School, Kansas City, Kan., on Acute Rheumatic Fever and Its Complications.

That of Harold W. Smith, Bureau of Medicine and Surgery, Navy Department, Washington, D. C., on the Medical Department of the United States Navy.

That of Marcy L. Sussman, M. F. Steinberg and Arthur Grishman, Mount Sinai Hospital, New York, on Angiocardiography in Congenital and Rheumatic Heart Disease.

CERTIFICATES OF APPRECIATION

Especially noteworthy are the thirteen exhibits contributed by our sister Pan American republics. These were planned before the war was brought to the shores of the Western Hemisphere but, in spite of the difficulties and hazards which the war entailed, these exhibitors with the support of their governments were most willing to carry on as planned. Most of the exhibits which have not arrived were either lost or delayed in transit.

With this splendid contribution to the Scientific Exhibit at this session, Certificates of Appreciation are gratefully awarded to each of the following exhibitors:

Raul F. Vaccarezza and Juan Paso, Catedra de Patologia y Clinica de la Tuberculosis, Buenos Aires, Argentina, for exhibit on Epidemiology of Tuberculosis in Argentina—Its Influence on the Human Economic Value.

Enrique Viacava, Buenos Aires, Argentina, with the assistance of Hayes E. Martin, Memorial Hospital, New York, for exhibit on Cancer of the Lip.

Guillermo A. Bosco, University of Buenos Aires Medical School, Buenos Aires, Argentina, for exhibit on Anatomic Revision of the System of Coronary Arteries: New Nomenclature of Myocardial Infarct and Clinical and Symptomatologic Bases for an Anatomicotopographic Diagnosis of Coronary Arterial Obstruction.

Alejandro Lipschutz, Department of Experimental Medicine of the National Health Service, Republic of Chile, Santiago, Chile, for exhibit on Experimental Uterine and Extragenital Fibroids Induced by Estrogens: Metaplasia and Adenomatous Polyps of Endometrium.

Gonzalo Esguerra-Gomez, Clinica de Marly, Bogota, Colombia, for exhibit on Bone Changes in Leprosy.

Horacio Zalce, Mexico City, Mexico, with the assistance of Bradley L. Coley, Memorial Hospital, New York, for exhibit on Bone Tumors.

J. Menendez Feros, service of Pedro A. Castillo, University of Havana, Havana, Cuba, for exhibit on the Electrocardiogastrogram.

P. L. Farinas, University Hospital, Havana, Cuba, for an exhibit on Mucosography of the Organs of the Respiratory Tract.

V. Pardo-Castello and Francisco R. Tiant, University of Havana Medical School, Havana, Cuba, for an exhibit on Leprosy: The Correlation of Its Clinical, Immunologic, Pathologic and Bacteriologic Aspects.

National Department of Health of Brazil, Service of Studies and Investigations of Yellow Fever, Rio de Janeiro, Brazil, for an exhibit on Yellow Fever in Brazil.

National Department of Health of Brazil, Malaria Service for the Northeast, Rio de Janeiro, Brazil, for an exhibit on the Story of the Eradication of Anopheles (Myzomyia) Gambiae from Brazil.

(Carlos Monge and Associates from the Faculty of Medicine and National Institute of Andean Biology, Lima, Peru, are awarded the Certificate of Merit in Group I.)

(John C. Bugher and Manuel Roca-Garcia, Section of Special Studies, National Department of Health, Bogota, Colombia, are awarded the Gold Medal in Group I.)

SPECIAL CERTIFICATES OF MERIT

Of great interest and value are the special lectures and demonstrations on diabetes and the Kenny method for the treatment of poliomyelitis. The large and attentive audiences at each of these demonstrations is convincing evidence of the interest and appreciation of them. The Committee on Awards compliments the director of the Scientific Exhibit on the arrangement of these exhibits and expresses its appreciation to the exhibitors by awarding to each of them a Special Certificate of Merit.

SUBSIDIZED EXHIBITS

Of unusual educational value are the Special Exhibits on Fractures and Backache sponsored by the American Medical Association, and the exhibit on Dietary Deficiency Diseases presented by members of the Council on Foods and Nutrition of the American Medical Association.

COMMENTS AND RECOMMENDATIONS

On entrance to the Scientific Exhibit this year, one is immediately impressed with the pleasing and attractive appearance of the hall. This creates an atmosphere immediately favorable to the attendance at and interest in the individual exhibits. The Committee on Awards commends those responsible for the Scientific Exhibit for this splendid achievement.

The showing of silent and sound motion pictures in small theaters adjoining the exhibit hall is again proving to be a most valuable adjunct to the exhibit proper. The excellence of these pictures from the point of view both of photographic and of educational value, is worthy of special commendation. It is the recommendation of the Committee on Awards that this feature of the Scientific Exhibit be continued.

The Scientific Exhibit is intended to serve two primary purposes: the presentation of new developments in medicine and the instruction of the profession in regard to diseases and conditions of interest and importance to them. The exhibit this year serves well both of these purposes, but especially impressive is the teaching value of many of the exhibits and demonstrations.

The representatives to the Scientific Exhibit from the sixteen sections have rendered invaluable service to the Committee on Scientific Exhibit and to the director of the Scientific Exhibit in encouraging the presentation of exhibit material of special interest and merit. Only the limitation in the number of awards available prevented official recognition of a large number of exhibits of undoubted merit.

The Committee on Awards wishes to express the appreciation of the thousands of physicians who have profited by these exhibits to the Committee on Scientific Exhibit of the Board of Trustees, the Advisory Committee to the Scientific Exhibit, the section representatives and to the director of the Scientific Exhibit for this unique and interesting postgraduate instruction in medicine.

Under the able direction of Dr. Thomas G. Hull, the Scientific Exhibit has clearly become the outstanding feature of the annual session of the American Medical Association.

HAROLD S. DIEHL, Minneapolis, Chairman.
MAX M. PEET, Ann Arbor, Mich.
JOHN W. SCOTT, Lexington, Ky.
A. C. IVY, Chicago.
H. S. MARTLAND, Newark, N. J.

MEDICAL LEGISLATION

MEDICAL BILLS IN CONGRESS

Changes in Status.—S. 2412 has been reported to the Senate, providing benefits for the injury, disability, death or enemy detention of civilians and for the prevention and relief of civilian distress arising out of the present war. H. R. 7164 has passed the Senate, amending the Soldiers' and Sailors' Civil Relief Act of 1940. The purpose of the reported bill is to make available additional and further relief and benefits to persons in the military and naval forces. Among other things, it brings within the purview of the act transactions occurring subsequent to Oct. 17, 1940, provides for the cancellation of leases entered into by persons subsequently called into military service and covering premises occupied for dwelling, professional, business, agricultural or similar purposes, and, in connection with premiums on insurance policies, extends the benefits of the law to policies up to $10,000 face value. H. R. 7239 has been reported to the House, proposing to authorize the Director of the Census to issue certifications of birth records.

Bills Introduced.—The President has submitted to Congress a supplemental estimate of an appropriation in the amount of $10,000,000 to assist students, in such numbers as the chairman of the War Manpower Commission shall determine, participating in accelerated programs in degree-granting colleges and universities in engineering, physics, chemistry, medicine (including veterinary), dentistry and pharmacy and such other technical and professional fields as the chairman may determine to be necessary in connection with the national war effort. H. R. 7231, introduced by Representative Dickstein, New York, proposes to create in each corps area of the United States, as now constituted, a medical training school for the instruction of physicians for the armed forces and the United States Public Health Service.

WOMAN'S AUXILIARY

Pennsylvania

The Allegheny County auxiliary held its seventeenth birthday party in January, at which Mrs. Charles C. Crouse, state president, was guest of honor. Mrs. Homer W. Grimm, president of the auxiliary, spoke on "Our Part in Defense." A gift of $350 was voted to the Red Cross.

At the January meeting of the Lycoming County auxiliary, with Mrs. P. Harold Decker presiding, Miss Pauline Naegely of the local chapter of the American Red Cross gave an outline of all the branches of service calling for volunteers to cooperate during the present emergency.

The annual Health Day meeting of the Allegheny County auxiliary was held, March 24, at Pittsburgh. Mrs. Edna Pearson, supervisor of the division of education of the state department of health, spoke on health day programs. Mrs. John Lawrence, from the Pittsburgh chapter of the American Red Cross, talked on the necessity of the blood bank.

The March meeting of the Chester County auxiliary met at Thorndale; $2 was received from each member to apply to the Medical Benevolence Fund. A general discussion on home defense activities followed talks by Mrs. Walter Webb and Mrs. Howard B. F. Davis on "Nurses Aids."

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

CALIFORNIA

State Medical Election.—Dr. Karl L. Schaupp, San Francisco, was chosen president-elect of the California Medical Association at its recent meeting in Del Monte, and Dr. William R. Molony Sr., Los Angeles, was inducted into the presidency. Dr. George H. Kress, San Francisco, was reelected secretary-treasurer. The 1943 session will be held at Del Monte, the date to be decided later.

Health Department Activities. — The cities of Antioch and Pittsburg have transferred the administration of their health affairs to the Contra Costa County Health Department in charge of Dr. William A. Powell, Martinez. Dr. Fred P. Nevius has been serving as health officer of Antioch and Dr. George C. Kelso as health officer of Pittsburg. With the exception of the cities of Richmond and El Cerrito, nearly all of Contra Costa County is now under the jurisdiction of the county health unit.——Plans are under way to establish a full time health unit in Marin County.

Surgical Impostor Never Studied Medicine. — Arthur Osborne Phillips, alias Dr. James Herman Phillips, was charged May 26 with impersonating a surgeon and performing major operations without a license at a hospital in Chico, newspapers reported May 28. The man, who is said to have served prison terms in five states, was held in the city jail on charges of practicing medicine illegally and illegal possession of firearms. The newspaper report stated that an agent for the California Board of Medical Examiners claimed that Phillip's knowledge of surgery came from prison textbooks. The report further stated that, according to the state board of medical examiners, the alleged impostor is believed to have performed thirty-one appendectomies during spasmodic masquerading as a physician in the past fourteen years. He assertedly had performed four appendectomies, tonsillectomies and abdominal operations during the two months he had been in Chico. He signed one death certificate and one birth certificate, it was stated.

DELAWARE

Society News.—The New Castle County Medical Society of Delaware was addressed on May 19 at the Academy of Medicine, Wilmington, by Drs. Brice S. Vallett on "Carcinoma of the Prostate Gland"; Victor D. Washburn, "Modern Catheters in the Management of Urinary Retention," and Lang W. Anderson, "Some Urologic Problems." All are of Wilmington. Dr. Allen F. Voshell, Baltimore, recently addressed the society on "Anatomy of the Knee Joint in Relation to Internal Derangements."

FLORIDA

Venereal Disease Control Program.—The state department of health has launched a program of venereal disease control in cooperation with the Works Progress Administration and the U. S. Public Health Service. The campaign will be emphasized in military and war industry areas.

State Medical Election.—Dr. Eugene G. Peck, Ocala, was chosen president-elect of the Florida Medical Association at its annual session in Hollywood, April 15. Dr. Gilbert S. Osincup, Orlando, was inducted into the presidency and Dr. Shaler A. Richardson, Jacksonville, was reelected secretary. St. Petersburg was designated as the place for the next annual meeting, April 12-14, 1943.

GEORGIA

Postgraduate Clinics.—The Emory Medical Alumni Association conducted its postgraduate clinics June 2-4. At the annual banquet Thursday the following program was presented:

Dr. Walter C. Jones Jr., Miami, Fla., Reflexes Observed During Abdominal Surgery.
Dr. Eugene A. Stead Jr., Atlanta, The Teaching Program in the Department of Medicine.
Dr. William B. Clark, New Orleans, Anterior Segment Eye Diseases.
Dr. William K. Purks, Vicksburg, Miss., The Internist's Responsibility Regarding Surgical Problems of Geriatric Patient.

Crawford Long Memorial Building.—The Medical Association of Georgia at its recent meeting in Augusta set aside $5,000 as a nucleus for a fund to construct the Crawford W. Long Memorial Building. The fund will be increased from year to year as the association directs. The building is to serve as a memorial to the late Dr. Long and as the permanent headquarters of the association. According to a resolution adopted by the association, this action marks the one hundredth anniversary of Dr. Long's discovery of anesthesia. Construction will begin when a suitable fund is available. Plans will be under the direction of the council of the association.

ILLINOIS

State Committee to Disseminate Information. — The organization of a statewide public health committee is under way in Illinois "to disseminate accurate information for the purpose of developing a widespread intelligent lay understanding of existent public health problems, what is being done, and what can be done, to solve them." Frederic C. Woodward, vice president emeritus of the University of Chicago, is chairman of the committee.

Outbreak of Smallpox.—Eleven thousand persons in the Argo-Summit war plant area, southwest of Chicago, have been vaccinated because of an outbreak of smallpox there the week of June 15. The disease was discovered when a 21 year old Negro, a resident of Chicago, entered Cook County Hospital with a condition first diagnosed as secondary pustular syphilis. An investigation revealed that he had been visiting his relatives in Summit where others were apparently ill with chickenpox and where subsequent investigation disclosed 8 other cases of smallpox. All the cases were traced to a small Negro boy from Missouri who visited recently in Argo. Twelve nurses of the Cook County Public Health Unit made a house to house canvass, instructing all persons who had not been vaccinated within the last five years to be vaccinated by their own physicians or to be vaccinated by the health department physicians. Vaccination stations were set up in the Argo-Summit Health Center and in the public schools in Summit for persons unable to pay their private physicians. About 4,000 persons in plants were vaccinated by industrial physicians, 3,000 by family physicians and 4,000 in the vaccination clinics.

Chicago

Personal.—Dr. Samuel M. Feinberg, Chicago, was appointed honorary member of the Sociedad Argentina para el Estudio de la Algeria, Buenos Aires, Argentina.——Dr. Karl A. Meyer has been chosen president of the board of trustees of the University of Illinois.

Honorary Citations Awarded to Physicians. — Northwestern University presented an award of merit during its commencement, June 12, to Dr. Herman L. Kretschmer, treasurer of the American Medical Association, in recognition of worthy achievement which has reflected on Northwestern University. The collegiate division of the University of Chicago awarded honorary citations to the following doctors of medicine, all graduates of Rush Medical College, in special recognition of achievements in their special fields:

Dr. Edward V. L. Brown, 1898, professor of ophthalmology (Rush), University of Illinois College of Medicine.
Dr. Ralph C. Brown, 1904, professor of medicine, (Rush) at Illinois.
Dr. Noble Sproat Heaney, 1904, professor of obstetrics and gynecology at Illinois.
Dr. Archibald L. Hoyne, 1904, professor of pediatrics (Rush) at Illinois.
Dr. Harry E. Mock, 1906, associate professor of surgery, Northwestern University Medical School.
Dr. Dallas B. Phemister, 1904, Thomas D. Jones professor and chairman of the department of surgery, University of Chicago.
Dr. Wilber E. Post, 1903, Rush professor of medicine at Illinois.
Dr. Kellogg Speed, 1904, professor of surgery (Rush) at Illinois.

LOUISIANA

State Medical Election.—Dr. Charles C. De Gravelles, New Iberia, was chosen president-elect of the Louisiana State Medical Society at its recent annual meeting, and Dr. Emmett L. Irwin, New Orleans, was inducted into the presidency. Other officers include Drs. John T. O'Ferrall, New Orleans; William V. Garnier, Bastrop, and Edwin H. Lawson, New Orleans, vice presidents. The next annual meeting will be held in Baton Rouge. Dr. Paul T. Talbot, New Orleans, is secretary-treasurer.

Dr. Fenner Honored. — Dr. Erasmus D. Fenner, New Orleans, first physician on the staff of Charity Hospital, New Orleans, to complete fifty years' service at the hospital, was presented with a loving cup in special ceremonies in his home, June 1. Dr. Fenner graduated at Tulane University of Louisiana School of Medicine, New Orleans, and was for years in charge of the children's wards and clinics. In 1907 he con-

fined his work to orthopedics and the surgical diseases of children. In 1920, when separate fracture services were established in the hospital on Dr. Fenner's suggestion, he was placed in charge of one of the services and has remained in charge of one or more service continuously since then. He became a member of the teaching staff at Tulane in 1893. He was professor of pediatrics from 1903 to 1907, when a separate department of orthopedics was established with Dr. Fenner as the first head. He resigned from this position in 1927, becoming emeritus professor of orthopedics and surgical diseases of children.

MICHIGAN

Russel Award to Dr. Freyberg.—The Henry Russel Award of the University of Michigan, Ann Arbor, went this year to Dr. Richard H. Freyberg, assistant professor of internal medicine at the medical school and director of the Rackham Arthritis Research Unit, for "distinguished achievement in medical research." The award is given annually to a member of the faculty below the rank of associate professor. Dr. Freyberg graduated at the University of Michigan Medical School, Ann Arbor, in 1930. In the same year Dr. Freyberg received the Sternberg medal, given to the student displaying ability in the study of preventive medicine.

Construction Started on School of Public Health.—Construction of the new $750,000 School of Public Health at the University of Michigan, Ann Arbor, has begun. The new unit is located on a hill opposite the observatory and immediately south of the University Hospital group. The west section will be three stories high and contain the principal classrooms, offices, library, auditorium and lounge. Eastward there will extend two wings, each two stories high, to house laboratories and research facilities. The east section will provide facilities for normal animals on the first floor and medium preparations and glassware services on the second floor. On the first floor will be offices and workrooms designed for the teaching of physiologic hygiene and maternal, infant and school health and accommodations for the study of virus diseases. The north wing of the first floor will be assigned to industrial health, with a large laboratory for studies in environmental health, research rooms for industrial toxicology, chemical laboratory and control chambers for studies on human subjects. The second floor will accommodate facilities for health education, museums, public health laboratory practice, public health nursing, laboratories for biostatistics and public health engineering. The third floor will contain classrooms and seminars for graduate and postgraduate instruction. The Rockefeller and W. K. Kellogg foundations have made most of the money available for construction of the unit.

MINNESOTA

Physicians Honored.—Dr. Henry F. Helmholz, Rochester, was awarded the Christmas Seal distinguished service plaque of the Minnesota Public Health Association on May 22. The honor went to Dr. Helmholz for his public health and Christmas Seal work in Olmsted County during the past twenty years.——Dr. Philip S. Hench, Rochester, has been awarded the Heberden Medal for 1942 by the Heberden Society of London "in recognition of his outstanding contributions to knowledge and progress in rheumatic diseases." The society was founded in 1936.

MISSISSIPPI

State Medical Election.—Dr. Ellis LeRoy Wilkins, Clarksdale, was chosen president-elect of the Mississippi State Medical Association at its annual meeting in Jackson, May 14. Dr. Wilkins has been serving as treasurer of the association for a number of years. Dr. Thomas M. Dye, mayor of Clarksdale, who has for twenty-five years served as secretary, was reelected to another term of three years. Dr. Hubert Lowry Rush, Meridian, was installed as president.

MISSOURI

Dr. Wood Named Professor of Medicine.—Dr. William Barry Wood Jr., Baltimore, has been appointed Busch Professor of Medicine at Washington University School of Medicine, St. Louis, to succeed Dr. David P. Barr who resigned last year to accept a similar position at Cornell University Medical College, New York. Dr. Wood graduated at Johns Hopkins University School of Medicine in 1936. For a time he worked as an assistant at the Thorndike Laboratory at the Boston City Hospital and more recently as associate in medicine at Johns Hopkins University School of Medicine. He is a member of the Committee on Pneumonia of the Surgeon General of the U. S. Army.

NEBRASKA

Personal.—Dr. Maine C. Andersen has been appointed director of the health service at the University of Omaha, effective September 1. He succeeds Dr. John C. Sharpe, resigned. Both are from Omaha.——Dr. Gregory L. Endres, Omaha, has been named director of the newly created Dodge-Saunders counties health unit.

State Medical Election.—Dr. Albert L. Cooper, Scottsbluff, was named president-elect of the Nebraska State Medical Association at its annual meeting in Omaha, May 4-7. Dr. Dexter D. King, York, was installed as president and Dr. Roy B. Adams, Lincoln, was reappointed secretary-treasurer to serve until May 1945. The 1943 session will be held in Lincoln.

NEW YORK

New Professor of Anatomy.—Donald Duncan, Ph.D., associate professor of anatomy, University of Texas Faculty of Medicine, Galveston, Texas, has been appointed professor and head of the department of anatomy at the University of Buffalo School of Medicine, Buffalo. Dr. Duncan received his Ph.D. at the University of Minnesota in 1929 and has served on the faculties of medicine of Buffalo and Utah universities.

New York City

School Honors Class of 1892.—Dr. Charles D. Cropsey, Rutherford, N. J., and Dr. Arthur B. Van Loon, Albany, N. Y., were presented with diplomas during the eighty-second annual commencement exercises at the New York Medical College, Flower and Fifth Avenue hospitals, June 5. The physicians are two of the nine surviving members of the class of 1892, and the diplomas marked their completion of fifty years in the practice of medicine.

Thirty Years of Public Relations.—The committee on public health relations of the New York Academy of Medicine has published a report summarizing "its thirty years of service to the people of greater New York" since its establishment in 1911. The report covers the committee's activities on community health organization, prevention of disease and care of the sick, control of environment, child care, delinquency and crime, war problems and a number of other subjects relating to the city's health population.

Directory of Tuberculosis Clinics.—There are twenty-six officially designated district clinics and forty non-district consultation and survey clinics serving New York City, according to the directory of tuberculosis clinics compiled by the New York Tuberculosis and Health Association. The directory, which is just off the press, gives the location of each clinic, the type of service given, the names of the physicians and nurses in charge and the medical social workers. Maps showing the boundaries for the Tuberculosis District Clinics are also included in the directory, copies of which may be obtained by writing to the New York Tuberculosis and Health Association, 386 Fourth Avenue.

Venereal Disease Films for Men.—The bureau of social hygiene of the department of health announces that two new films are available for projection to audiences of men anywhere in the city. The films for laymen tell the facts about prophylaxis for syphilis, gonorrhea and other venereal diseases. The film "Know for Sure" was produced for the U. S. Public Health Service and "Health Tactics" for the Bureau of Medicine and Surgery of the U. S. Navy. Physician lecturers associated with industrial plants, schools and other organizations are invited to schedule these films in their health education program. Motion picture projection equipment and personnel are also provided.

OHIO

Surgeon Honored on Eightieth Birthday.—Dr. John C. Oliver, professor emeritus of surgery, University of Cincinnati College of Medicine, was honored on his eightieth birthday, May 7, when the Elizabeth Gamble Deaconess Home Association and Christ Hospital dedicated their fifty-second annual report to him as a tribute to his long service to the hospital and to the city. Dr. Oliver, who graduated at Miami Medical College in 1885, now known as the University of Cincinnati College of Medicine, is the only surviving member of the original group of eighteen staff members formed in 1889 for the Christ Hospital. He still serves as consultant in surgery.

Dr. Evans Receives Chemists' Medal.—William Lloyd Evans, Ph.D., professor and chairman of the department of chemistry, Ohio State University, Columbus, was awarded the annual medal of the American Institute of Chemists at its meeting in Atlantic City, May 16, for "outstanding service to

the science of chemistry and the profession of chemists in America. Dr. Evans received the award in recognition of accomplishments in the field of oxidation of organic compounds, particularly in the oxidation of carbohydrates. Dr. Evans received his degree of doctor of philosophy at the University of Chicago in 1905; since then he has been a member of the Ohio faculty.

Physicians Missing in War Area.—Newspapers report that Capt. John A. Marsico, formerly of Lorain, a member of the American forces in the Philippines when Corregidor fell, May 7, is "missing in action." According to the report, the war department will consider the persons serving in the Philippine Islands as "missing in action" from the date of the surrender of Corregidor until definite information to the contrary is received. Captain Marsico is said to have been serving in the Philippines for the past eighteen months. Major James H. Bahrenburg and Capt. Mark G. Herbst, Canton, were reported missing, May 23. It was believed that both physicians were on the Bataan peninsula when it was surrendered to the Japanese.

PENNSYLVANIA

Society News.—Dr. Joseph H. Barach, Pittsburgh, addressed the Clearfield County Medical Society in Clearfield, May 21, on "Clinical Consideration of Functional and Organic Diseases of the Blood Vessels."——A joint meeting of the Reading Eye, Ear, Nose and Throat Society and the Reading Dental Society, May 20, was addressed by Dr. Robert Henry Ivy, Philadelphia, on "Plastic and Maxillofacial Surgery."——Dr. Eldridge L. Eliason, Philadelphia, addressed the Delaware County Medical Society at the Chester Hotel, Chester, June 11, on "Man and His Gallbladder."——Dr. Irwin M. Pochapin, Pittsburgh, addressed the Washington County Medical Society, Washington, June 17, on "Medical Aspects of Chemical Warfare."

Philadelphia

Scarlet Fever Quarantine Lifted.—A scarlet fever quarantine, in effect at the Philadelphia State Hospital at Byberry since March 6, has been lifted, newspapers reported on June 5. The quarantine was imposed because of the prevalence of the disease in Philadelphia. The report stated that 4,089 cases had developed in Philadelphia up to June 5 this year as compared with 2,320 during the same period in 1941. The removal of the quarantine from the hospital permits visitors for the first time since March 6.

College of Pharmacy Commencement.—Dr. Hubley R. Owen, city director of public health, gave the principal address at the one hundred and twentieth annual commencement of the Philadelphia College of Pharmacy and Science, May 27. His subject was "Keeping Fit for Victory." An honorary degree of doctor of science was awarded, among others, to Dr. Randle C. Rosenberger, professor of preventive medicine and bacteriology at Jefferson Medical College of Philadelphia. At the alumni homecoming the preceding day the presidential address was delivered by Dr. Henry H. Perlman, Philadelphia.

VIRGINIA

The Horsley Prize.—Dr. James W. Watts, associate professor of neurosurgery, George Washington University School of Medicine, Washington, D. C., received the John Horsley Memorial Prize in medicine, May 4, for his paper on "Psychosurgery," written in association with Dr. Walter Freeman, Washington. The award carries a stipend of $600 and is presented every two years by the University of Virginia, Charlottesville. The president and visitors research prize was awarded to Walton C. Gregory, M.A., Amherst, research worker in biology at the university, and Arthur W. Jones, LL.B., Norfolk, won the $50 Andrew Fleming prize in biology, given annually to a graduate student.

Gifts to University of Virginia.—More than $500,000 will go to the University of Virginia Department of Medicine, Charlottesville, under specific bequests and pledges, according to a recent announcement. Under the will of the late Mr. William James Rucker, Charlottesville, $25,000 was left to the medical school for research in etiology and treatment of arthritis. One third of the residual estate, estimated at more than $1,000,000, will go to the University Hospital. The other two thirds is to be divided between the Martha Jefferson Hospital and Sanitarium, Charlottesville, and St. Luke's Hospital, St. Louis. Under the will of Dr. William E. Hopkins, Los Angeles, the medical school has received $13,432 for the purchase of medical books and journals for the medical school library. On the death of Dr. Hopkins' widow, the residuary estate of about $125,000 will go to the medical school. Dr. Stephen H. Watts, professor of surgery at the school from 1907 to 1928, has established an endowment fund for the purchase of books and periodicals for the library. The McIntyre Tumor Clinic at the university will receive the residue of the $11,000 estate of the late Nancy Vance for the treatment and terminal care of persons with incurable cancer. The John and Mary R. Markle Foundation has given $2,000 to support further investigations on heparin in relation to peritoneal adhesions and other tissue reactions under the direction of Drs. Edwin P. Lehman and Floyd E. Boys, and the National Research Council has granted $2,000 to the department of physiology for work in endocrinology under the direction of Dr. Sydney W. Britton. The department of syphilology and dermatology has been given $3,600 by E. R. Squibb and Sons for the study of a new arsenical in the treatment of syphilis over a three year period.

WEST VIRGINIA

State Meeting to Be in Huntington Instead of Sulphur Springs.—The state medical association announces that the state medical meeting will be at the Prichard Hotel, Huntington, instead of at White Sulphur Springs. The date remains the same, July 13-15.

GENERAL

Phillips Memorial Medal Awarded.—The John Phillips Memorial Medal of the American College of Physicians was awarded jointly to the late Dr. James D. Trask and to Dr. John R. Paul, who is associate professor of medicine at Yale University School of Medicine, New Haven. Dr. Trask died on May 24, 1942. Dr. Paul graduated at Johns Hopkins University School of Medicine, Baltimore, in 1919 and has been at Yale since 1928.

National Maternal Council Suspends Activities.—Because of lack of funds the National Maternal and Child Health Council, formerly National Council for Mothers and Babies, Washington, D. C., will suspend activities, although the council will continue as a corporation for the present, it is announced. A fund to finance the council through contributions from its constituent members has failed, and support from foundations could not be assured.

Kober Medal Goes to Dr. Van Slyke.—Dr. Donald D. Van Slyke, chief chemist at the Rockefeller Institute Hospital, New York, was presented with the George M. Kober Medal, May 6, during the annual meeting of the Association of American Physicians in Atlantic City. The award, which is given for outstanding service to medicine, was presented to Dr. Van Slyke for his "contributions to the treatment of diabetes and Bright's disease, as well as for his work toward oxygen treatment of pneumonia." Dr. Van Slyke was born in Pike, N. Y., in 1883. He received his Ph.D. degree at the University of Michigan, Ann Arbor, in 1907 and his degree in medicine at the University of Oslo in 1938. He has been research chemist for the Rockefeller Institute since 1907 and chief chemist at its hospital since 1914.

Report on Prevention of Blindness.—The National Society for the Prevention of Blindness expended almost $164,000 in 1941. A new program instituted during the year was a glaucoma demonstration project in connection with clinic procedures. Fifteen hospitals in New York are participating by organizing special services for glaucoma patients. During the year the society extended its services to many groups interested in sight conservation, cooperated in sight-saving classes and sponsored a four month course at the George Warren Brown Department of Social Work, Washington University, St. Louis. Recommendations for statewide programs were made by the society at the invitation of the Maine commissioner of health and welfare and the Louisiana commissioner of public welfare. The society made 750 broadcasts in 1941 and used such other means as newspapers, magazines, exhibits and film showings to reach the general public. More than 25,000 pamphlets were distributed.

Conference on Tomorrow's Children.—The third New England Conference on Tomorrow's Children will be held in Cambridge, Mass., July 8-10, under the auspices of the Harvard Summer School and twenty-seven cooperating organizations. As in the first two conferences, the program this year will deal with various phases of child, family and population problems in relation to the war crisis of modern society. The program is designed to be of special interest to workers in the fields of health, social work, education, religion, family relations, eugenics and social and economic planning. The opening session will be devoted to "The Family in the World Crisis of Democracy." In the afternoon there will be symposiums on "The Family and the New World Order," "Nation and Family"

and "Family Living and Community Life." There will also be roundtables on "Marriage and Family Relations in Wartime," "Child Development and Protection in Wartime" and "Social-Economic and Population Planning in Wartime."

Research Fellowships Awarded.—The Finney-Howell Research Foundation announces that the following eight fellowships have been awarded for one year:

Dr. Julius B. C. Abels, to work at the Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York.
Dr. Glenn Horner Algire, to work at the National Cancer Institute, Bethesda, Md.
Bernerd E. Kline, M.S., to work at McArdle Memorial Laboratory, University of Wisconsin, Madison.
Margaret Nast Lewis, Ph.D., to work at the Crocker Radiation Laboratory, University of California, Berkeley.
Alfred G. Marshak, Ph.D., to work at Crocker Radiation Laboratory.
Rose I. Shukoff, to work at the Glasgow Royal Cancer Hospital, Glasgow, Scotland.
Emilia Vicari, A.M., to work at the Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine.
Benjamin Norman Horwitt, Ph.D., to work at Harvard University, Converse Memorial Laboratory, Cambridge, Mass.

The Finney-Howell Research Foundation was created under the will of the late Dr. George Walker, Baltimore, to support "research work into the cause or causes and the treatment of cancer."

International College of Surgeons.—The National Assembly of the International College of Surgeons will be held at the Shirley-Savoy Hotel, Denver, July 15-18. Among the speakers will be:

Dr. Edwin C. Henry, Omaha, Acute Abdomen.
Dr. Brien T. King, Seattle, A New and Function-Restoring Operation for Bilateral Abductor Cord Paralysis.
Dr. Andre Crotti, Columbus, Ohio, Some of the Pitfalls in Thyroid Surgery.
Dr. Manuel Manzanilla A., Mexico City, Surgery of Diabetes Mellitus.
Dr. Elmer Hess, Erie, Pa., Treatment of Tumors of the Upper Urinary Tract.
Dr. Thomas A. Shallow, Philadelphia, Osteogenic Sarcoma with Report of Sixty-Five Cases.
Dr. Edward V. M. Mastin, St. Louis, An Improved Operation for Repair of Inguinal Hernia.
Dr. Verne C. Hunt, Los Angeles, Surgical Consideration of Obstruction Lesions of the Common Duct.
Dr. Albert A. Berg, New York, The Preservation of the Sphincter Ani in Radical Operation for Carcinoma of the Rectum.
Dr. Rudolf Nissen, New York, Drainage into Alimentary Canal as Method of Choice in Operative Treatment of Pancreatic Cysts and Fistulae.
Dr. Tom Bentley Throckmorton, Des Moines, Iowa, Psychotherapy in General Medicine and Surgery.
Dr. Harry H. Everett, Lincoln, Neb., Certain Observations on Right Upper Quadrant Surgery.

A military symposium will be the feature of the meeting.

Navy Awards E Pennant to Manufacturers of Medical Supplies.—In the U. S. fleet, service is recognized by granting to any unit which has particularly distinguished itself the privilege of displaying the letter E. If a ship surpasses all others in gunnery, an E is painted on the winning turret and all men who helped win the honor are accorded the privilege of wearing a white E on the sleeve of their dress uniform. If a ship has distinguished itself in engineering, the E is painted on the funnel and again the champion men are given the right to wear the E. There is no more coveted honor. The first All Navy E ever awarded to a pharmaceutic manufacturing company was presented on June 12 to John Wyeth & Brother, Inc., of Philadelphia; it was one of two made at the recommendation of the Bureau of Medicine and Surgery of the Navy, the other award having been made to Johnson & Johnson of New Brunswick, N. J., manufacturers of medical supplies.

At the ceremony of award to John Wyeth & Brother Robert L. Johnson, president of Temple University, was toastmaster; the speakers were Rear Admiral Charles M. Oman, Medical Corps, U. S. Navy, Senator James J. Davis, Representative Leon Sacks, Mayor Bernard M. Samuel, Mr. Frank F. Law and Mr. Alfred Barol, president and vice president respectively of John Wyeth & Brother. In his address, Admiral Oman said "It is the custom of the Navy to recognize service in whatever capacity it is to be found. Your contributions, which can be considered only in terms of the alleviation of human sufferings, are beyond price. It is of the merciful work that your medicines have done in our great sea battles, such as Coral Sea and Midway, that we like to think. A man wounded, in pain, is a man demobilized. A sound man, quickly healed after being put out of action, is one more strong hand to man the guns. Your drugs have helped to heal the wounded and to put them back into the battle full of life—and fighting mad; so we have brought the Navy E ashore, and it is my privilege to present the pennant to you today."

The award was made for a period of six months, at the end of which time the company's record will be reviewed again by the Navy and, if performance merits continued recognition, the right to fly the Navy E will be granted for an additional six months, and every six months the company's record will be similarly reviewed. John Wyeth & Brother, which was founded in 1860, has supplied the armed forces with pharmaceuticals in the Civil War, the Spanish-American War, World War I and the present war.

FOREIGN

Public Health Under Hitler's Rule.—*Donauzeitung*, Belgrade, of April 25 cited an official announcement that there is a shortage of six thousand doctors for the front. It is also stated that the reference in *Universul* to 2,040 cases of typhus means nothing, as the yearly average for typhus is 3,621 cases.

De Standaard, Amsterdam, of March 24 reported that the burgomaster of The Hague has ordered that two gardens are to be devoted to the cultivation of medicinal herbs. One is to be at the Duinlaan near Kijkduin and the other between the Schenk and the railway to Leiden. Medicinal herbs will be grown which once had to be imported. The total area given over to this cultivation is to be about 40 hectares (100 acres).

Donauzeitung, Belgrade, of April 23 reported that, thanks to the energetic efforts of the Ministry of Public Health, large quantities of vaccine have been imported and a great part of the population inoculated against typhus and cholera.

Transocean of April 24 reported that the Ministry of Health denied rumors alleging the existence of an epidemic (of typhus) in Athens and the Piraeus. It was stated that there had been a few cases, but not 1 has been serious. It also stressed that all hygienic measures had been taken to prevent the possibility of epidemics.

Berlingske Aftenavis, Copenhagen, of April 28 stated that the Esbjerg County Council's previous 8,000 kroner grant for delousing the citizens of Esbjerg has been increased by 7,000 kroner, as the work is more comprehensive than first expected.

Transocean of April 28 reported from Sofia that the public health authorities have registered during the past week 39 cases of typhus in the Shumen district of northern Bulgaria. They were mostly confined to gypsies and the epidemic is already abating.

DNB of May 4, 1942 states that addressing a meeting of the doctors and representatives of the other healing professions of the Gau Karnten in Klagenfurt, Reich Health Leader Dr. Conti, who was accompanied by Gauleiter Dr. Rainer, said that the birth rate in 1941 was evidence of the unbroken vitality of the German people. He announced that the number of births in 1941 was 1,528,000 live births, only slightly below the figure for 1940, which was a record year. In spite of the heavy wartime tasks, the favorable development had continued; its significance could be fully estimated only by comparison with the figures for 1932 and 1933, when the number of births was considerably less than a million.

CORRECTIONS

Sulfonamide Resistance Developing During Treatment of Pneumococcic Endocarditis.—Dr. Morton Hamburger Jr., senior author of the Clinical Note with the foregoing title in THE JOURNAL, May 30, requests the following correction of the third sentence in the second paragraph under the subtitle "Course" on page 409: "Sulfapyrazine was again administered, and after four days of treatment the blood became sterile. Treatment was continued for thirty-four days with blood levels of the drug maintained between 6.4 and 16.5 mg. per hundred cubic centimeters."

Federal and State Aid.—In THE JOURNAL, June 6, page 505, the medical economic abstract entitled "Federal and State Aid" stated that $5,071,000 of federal funds were given to aid crippled children and $3,739,000 of federal funds were given for maternal and child health. Dr. Edwin F. Daily, director of the Division of Health Services, Children's Bureau, U. S. Department of Labor, Washington, D. C., writes that these figures should be reversed; that is, $5,071,000 was given for maternal and child health, and $3,739,000 of federal funds were given to crippled children. The error was made, Dr. Daily said, by the U. S. Department of Commerce, which published the article "Federal and State Aid," 1941. These figures represent payments to the states from the federal treasury in a given fiscal year and are exclusive of payments to Hawaii, Alaska, Puerto Rico and the District of Columbia. The total amounts of federal grants-in-aid paid to the forty-eight states, Hawaii, Alaska, Puerto Rico and the District of Columbia in 1941 were $5,486,079 for maternal and child health services and $3,919,837 for crippled children's services.

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 9, 1942.

The Question of Adding Calcium to Bread

In August 1940 the Medical Research Council, on the advice of their accessory food factors committee, recommended that white flour be replaced by a flour of greater extraction in order to save shipping and to improve the nutritional qualities of bread. They also recommended the addition of calcium carbonate, since cereals do not contain enough for the growing animal. Cereals also contain phytic acid, which prevents the body from making use of some of the other calcium in food by precipitating it in the alimentary canal and so preventing its absorption. Dr. Israel Harris of the Research Institute, Liverpool, objects to the recommendation in the *Times*. There is, he says, no calcium shortage in the adult population. He also thinks that the addition may do harm, since it has long been established that calcium interferes with kidney function. Middle aged persons whose kidneys show weaknesses are bound to suffer. Children and pregnant women who require more calcium need other items as vital, and they can all be found in milk. Dr. Harris also does not admit that the calcium content of bread is not readily absorbed.

Sir Edward Mellanby of the Medical Research Council states in reply to Dr. Harris that the average person eats five sevenths of a pound of bread daily, in which the extra calcium would amount to 0.13 Gm., the amount contained in a sixth of a pint of milk. To say that this could injure the kidneys or blood vessels is absurd, especially in view of the war restrictions on the supply of milk to adults. The Food Rationing Advisory Committee of the Medical Research Council, composed of many well known scientists, has assured the Ministry of Food that "there is neither medical nor scientific evidence that the consumption of bread fortified by the addition of appropriate quantities of calcium salts is harmful to patients suffering from any type of disease."

Increased Stocks of Food

Mr. G. R. Whalley, principal assistant secretary of the cold storage division of the Ministry of Food, speaking at a luncheon of the British Association of Refrigeration, stated that our food stocks are 30 per cent higher than they were a year ago. This increase was no mean effort, considering how we had been cut off from our normal food supplies from other countries. A policy was being pursued of dispersing food stocks all over the country. The ministry had under direct control upward of six thousand warehouses for cold storage. He hoped that by the middle of the summer a substantial addition would be made to our cold storage capacity, and he forecast a great development of the industry after the war.

Women's Work in the War

In this war, even more than in the last, women are playing a great part not only in taking the places of men who have joined the fighting services but in munition and other work auxiliary to those services. They are making an ever increasing contribution to what has become known as the Merchant Service of the Air. Last year these aircraft flew 5,500,000 miles, and this year they will cover 8,000,000. The jobs performed by women range from architects, detailed designs for factory extensions, air raid shelters and other buildings to overhauling aero engines. They are beginning to be employed at airports as traffic clerks. A rapidly growing number are being employed in the factories where aircraft engines and other components are overhauled and repaired. One woman has been trained to compute the time of sunset and sunrise in any part of the world, the duration of twilight and to make a reliable wind analysis.

Association of Austrian Physicians in Great Britain

The victims of Nazi oppression are now present in large numbers in Britain from all the enslaved countries, of which Austria was the first. They include many physicians. An association of Austrian physicians in Britain has been formed under the chairmanship of Prof. Friedrich Silberstein of Vienna University. The desire is to continue the great traditions of the Vienna medical school in the spirit of scientific progress such as was accomplished by Pirquet, Wenckebach, Chvostek and Landsteiner. The association is affiliated with the free Austrian movement and aims at the cooperation of Austrian physicians in the war effort. There are now three hundred and sixty Austrian physicians in Britain, of whom more than half are already engaged in work of national importance in hospital and other institutions.

A Great Medical Missionary Society

The Medical Missionary Auxiliary of the Church Missionary Society, the largest medical organization of this kind in the world, is celebrating its jubilee this year. In large areas of Africa and the East its hospitals, clinics and welfare centers are doing work which equals that of the twelve great voluntary hospitals of London. But the beginning of medical missions dates back much longer than fifty years. The Church Missionary Society sent its first missionary physician to the Maoris of New Zealand in 1836. Another landmark was the sending of the first physician by the society to Kashmir in India in 1865. From this small beginning came a chain of hospitals along the northwestern frontier, which have been centers of peace and good will among the tribes people. From its earliest stages the mission hospital has been a great reconciling agency. Time has shown that foes of long standing forget their feuds and live at peace within the hospital wards. Today the large mission hospital at Hangchow is carrying on its work among Chinese soldiers and refugees with the full consent of Japanese officials and is equally ready to treat Japanese patients. Medical missionaries look toward the future and are giving far more attention to preventive medicine and the raising of the general level of health by the teaching of hygiene and the spread of welfare clinics. With the spread of government medical services, new plans of cooperation with them are being developed.

Social Biology in the War Effort

In a letter to the *Times*, the president of the British Social Hygiene Council, Sir Walter Langdon-Brown, and other officials of that body call attention to the importance of social biology at present. The falling birth rate and other problems of social biology have shown the need for a national movement to promote the application of existing biologic knowledge to current social problems. At the last meeting of the British Association for the Advancement of Knowledge it was proposed that an institute of social biology should be promoted forthwith as a consultative directive agency. The British Social Hygiene Council has been impressed with the adverse effect on the war effort of the failure to apply current knowledge to the problem of human relationships, personal anxieties and family instability. It regards this as a serious factor in the failure to obtain the nation's emotional drive toward a maximum efficiency. As a first step it proposes to convene a

national conference of the various interests — scientific and administrative—to consider how best social biology can be utilized in promoting the war effort and in safeguarding the future quality of the nation. Such a conference would help to integrate biologic knowledge and spiritual values into a system which would appeal both intellectually and emotionally to those responsible for the postwar social structure.

Restoration of Museum of Royal College of Surgeons

The destruction of the great museum of the Royal College of Surgeons by indiscriminate bombing has been described in previous letters. The immensity of the collection, the impossibility of securing storage elsewhere and the difficulty of securing transportation for it necessitated its retention in London. Special provisions made in reinforcing tunnels of the subbasement did not save valuable specimens. Most of the museum and part of the college were destroyed by a bomb which struck room V, the subadjacent war museum (of the last war) and store rooms, utterly demolishing them and shattering room IV, the instrument and invertebrate rooms. Incendiaries completely gutted room III and the historical and mummy rooms. Fallen roof girders broke open the subbasement, exposing to destruction much of the stored material. The comparative osteology and physiology store rooms were completely destroyed. It was a disaster. The loss of numerous Hunterian specimens, of the expression of Hunter's distinctive attitude toward vital phenomena and of his sustained pioneer efforts to unravel their nature is irreparable.

Already preparations for the restoration of the museum, as far as that is possible, are advanced. At the suggestion of the anatomist Prof. Wood Jones, the University of Manchester has presented specimens prepared by the late Professor Watson to illustrate Hunterian ideals. The medical committees of the Royal Cancer Hospital and of St. Mark's Hospital (for diseases of the rectum) have presented specimens illustrating different forms of rectal disease. The Royal Australian College of Surgeons is arranging for hospitals throughout Australia and New Zealand to collect pathologic specimens commonly seen in those countries and rare in the British Isles. The Institute of Anatomy at Canberra has earmarked many duplicate specimens for transfer to England and has promised to organize after the war expeditions to collect specimens of rare marsupials and monotremes. The rector of the Egyptian university and the dean of the Faculty of Medicine have promised that Egyptian surgeons will collect specimens of diseases not encountered in Great Britain. After the war these will be presented as a token of gratitude for the hearty cooperation that has existed for many years between British and Egyptian surgeons, most of whom are fellows of the English college.

Health in the Factory

Though damaged by bombs, the London School of Hygiene and Tropical Medicine carries on and does much valuable war work. The war has produced a great expansion of industry and recruitment of thousands of women workers and has led to a great increase in the number of medical officers employed in industry. At the school about 100 from all over the country and from a wide range of industries attend lectures. Among the subjects of the lectures are "Nature and Prevention of Toxic Risks," "Nature, Prevention and Treatment of Occupational Skin Disease," "Factory Hygiene: Assessment of Standards and Methods of Investigation," "Ophthalmology in Relation to Industrial Medicine" and "Protective Clothing and Appliances." Each lecture is followed by a discussion open to all.

BRAZIL

(From Our Regular Correspondent)

May 15, 1942.

Diagnosis of Tuberculosis

Drs. Guilherme Lacorte and Estacio Monteiro of Oswaldo Cruz Institute, Rio de Janeiro, accomplished some research on the diagnosis of tuberculosis. They examined by various methods material suspected of being tuberculous from twenty-nine sources, some human beings and some lower animals. Microscopic examination gave the largest percentage of positive results, 61.6, followed by the taking of cultures with 45 per cent, inoculation with 37 per cent and examination of smears with 33 per cent positive results. Unfortunately, microscopic examination is unsuitable in the majority of cases, and inoculation has the disadvantage of causing a high death rate among the small animals used.

Dr. Newton Neves da Silva of Porto Alegre, Rio Grande do Sul, emphasized the value of Loewenstein's method of culture as a means of confirming a suspicion of tuberculosis. He said that it is better than the inoculation method; that cultures can be taken from different materials without delay and that they can be made repeatedly with ease.

From human specimens suggestive of tuberculosis, including sputum, urine, ascitic fluid, lymph nodes, pus, pleural liquid and gastric juice, Dr. Fontes Magarao and his co-workers of Rio de Janeiro obtained positive results in 43.8 per cent when using bacteriologic methods, that is cultures and inoculations. Colonies developed in twenty to thirty days, while the inoculation of guinea pigs did not give positive results in less than two months after the injection.

Syphilis Among Workers

In a group of 3,700 workers in banks living in the city of São Paulo, Dr. Durval Rosa Borges found that 1,147 had signs of syphilis, i. e. 31 per cent of the total.

The diagnosis was made by four criteria:

Criterion	No. of Cases	Per Cent
Previous serologic reaction	200	5.40
History of chancre	29	0.78
Clinical evidence	7	0.18
Present serologic reaction	911	24.60

There are conflicting data in the city on the matter. Prof. Geraldo Paula Souza, director of the Instituto de Higiene, has found only 2.59 per cent of positive serologic reactions for syphilis among students of the University of São Paulo, while in the obstetric clinic of the same university Prof. Raul Briquet says that more than 50 per cent of the pregnant women present positive Wassermann reactions. Briquet's statistics refer to the poorer classes of citizens.

Anorectal Tubérculous Fistulas

In a paper on tuberculous anal fistulas, Dr. Jose Maria Caldas of Rio de Janeiro pointed out that the diagnosis can be made clinically. In a series of 66 fistulas, Dr. Caldas found that 19 per cent were tuberculous; 80 per cent of the patients were males. The author concluded that anorectal tuberculous fistulas are always secondary. The primary focus of tuberculosis was in the lungs in 100 per cent of the cases. While sometimes the patient appears to be healthy, he should nevertheless be sent to a lung specialist for search of a possible hidden pulmonary focus.

Diagnosis of Paludism by Analysis of the Bone Marrow

In many parts of Brazil paludism exists as an endemic disease. Drs. Ulysses Lemos Torres and Jose de Paula e Silva of Escola Paulista de Medicina studied smears of the bone marrow obtained by sternal puncture. They concluded that sternal puncture is the best method to search for the malarial parasite.

Deaths

Henry Gottlieb Steinmetz ✠ Lansing, Mich.; Indiana University School of Medicine, Indianapolis, 1927; assistant physician at the Logansport State Hospital, Logansport, Ind., from 1929 to 1934 and assistant superintendent from 1934 to 1937; served as medical director of public health of district number 6, Bloomington, Ind., from 1937 to 1939; taught the first course for nurses in public health administration at Indiana University in 1937; served as assistant medical director of public health in Arlington, Va., 1940-1941; acting health officer of Genesee County (Mich.) from 1941 until February 1942, when he became assistant director of the venereal division, Michigan Department of Health; served during World War I; member of the Medical Society of Virginia, American Psychiatric Association, American Public Health Association and the Michigan Public Health Association; received a master of public health degree from Johns Hopkins University, Baltimore; aged 45; died, April 22, of anesthetic shock.

Duncan Cameron Walton ✠ Medical Inspector, Commander, U. S. Navy, retired, Annapolis, Md.; Johns Hopkins University School of Medicine, Baltimore, 1909; entered the Navy, April 12, 1910, and retired, Sept. 1, 1935, for incapacity resulting from an incident of service; served as commanding officer of the Marine Hospital at Quantico, Va., during World War I; in 1922 was assigned as chief, department of toxicology, at Edgewood Arsenal, Md., where he served until 1925, with a similar assignment from 1928 to 1931; formerly lectured on toxicology at the Naval Medical School, Army Medical School, Washington, D. C., and the Naval Academy; member of the American Society for Pharmacology and Experimental Therapeutics and the Association of Military Surgeons of the United States; formerly associated with the Bureau of Medicine and Surgery in Washington, D. C.; aged 55; died recently in the U. S. Naval Hospital of coronary thrombosis, arteriosclerosis and hypertension.

William Henry Best, New York; University of Pennsylvania School of Medicine, Philadelphia, 1909; member of the Medical Society of the State of New York; deputy health commissioner of the city department of health since 1934; joined the health department in 1916 as a medical inspector and successively held the positions of borough diagnostician of Brooklyn, assistant sanitary superintendent and chief of the Brooklyn division of the bureau of preventable diseases and acting director; formerly assistant clinical professor of dermatology at the Long Island College of Medicine; served as a major in the medical department of the U. S. Army during World War I and at the time of his death was a lieutenant colonel in the medical reserve corps; aged 57; formerly visiting dermatologist to the Kings County Hospital, Brooklyn, consulting dermatologist at the Bushwick Hospital and the Hospital of the Holy Family, Brooklyn, where he died, June 3.

Ralph Munson Beach ✠ Brooklyn; Columbia University College of Physicians and Surgeons, New York, 1902; assistant clinical professor from 1930 to 1941 and since then professor of clinical obstetrics and gynecology at the Long Island College of Medicine; fellow of the American College of Surgeons; served in various capacities on the staff of the Long Island College Hospital; attending and consulting obstetrician from 1907 to 1928, Jewish Hospital; attending obstetrician from 1907 to 1941 and chief obstetrician and gynecologist since 1941, Methodist Hospital; attending obstetrician and gynecologist from 1926 to 1928, Israel Zion Hospital; chief obstetrician and gynecologist, Williamsburgh Maternity Hospital, from 1910 to 1912; aged 61; died recently.

Seymour Jerome Cohen ✠ Chicago; Rush Medical College, Chicago, 1920; at one time assistant and associate in pharmacology at the University of Illinois College of Medicine; served during World War I; pharmacologist for the Municipal Tuberculosis Sanitarium; formerly secretary of the Chicago Tuberculosis Society; member of the American Society for Pharmacology and Experimental Therapeutics and the American Trudeau Society; attending physician at the Michael Reese Dispensary; aged 46; died, June 11, in the Michael Reese Hospital of uremia.

Smith Augustus Spilman ✠ Ottumwa, Iowa; Chicago Medical College, 1879; member of the House of Delegates of the American Medical Association in 1926; an Affiliate Fellow of the Association; fellow of the American College of Surgeons; past president of the Iowa State Medical Society; formerly surgeon for the Chicago, Milwaukee and St. Paul and the Chicago, Burlington and Quincy and Wabash railroads; formerly surgeon and president of the staffs of the Ottumwa and St. Joseph's hospitals; aged 89; died, April 11, of coronary occlusion.

Walter Babcock Swift ✠ Boston; Harvard Medical School, Boston, 1907; member of the New England Society of Psychiatry; past president of the National Society for the Study and Correction of Speech Disorder; assistant in neurology from 1911 to 1914 and instructor in neuropathology, 1914-1915, at the Tufts College Medical School; had been affiliated with the Massachusetts General, Boston City and Boston Psychopathic hospitals; author of "Speech Defects in School Children and How to Treat Them"; aged 73; died, May 3, of pneumonia.

Mark Eugene Lott, Dallas, Texas; University of Texas School of Medicine, Galveston, 1904; professor of clinical surgery at the Baylor University College of Medicine; member of the State Medical Association of Texas and the American Association for the Surgery of Trauma; fellow of the American College of Surgeons; member of the American Board of Surgery; served as a lieutenant colonel in the medical department of U. S. Army during World War I; on the staff of the Baylor University Hospital; aged 63; died, April 26.

Charles Sweetser Benson ✠ Haverhill, Mass.; Columbia University College of Physicians and Surgeons, New York, 1896; fellow of the American College of Surgeons; past president of the Essex North District Medical Society; vice chairman of the medical advisory board of the Selective Service System; draft board physician during World War I; medical director of the Benson Hospital and Clinic; formerly member of the school committee; aged 69; died, April 30, of coronary thrombosis.

Constantine Popoff ✠ Haverhill, Mass.; Harvard Medical School, Boston, 1910; member of the American Board of Radiology, Inc., New England Roentgen Ray Society, Radiological Society of North America, Inc., and the American College of Radiology; on the staffs of the Amesbury (Mass.) Hospital and Haverhill Municipal Hospital; on the draft board during the first and second world wars; aged 58; died, May 30, at his summer home in Hampton Beach, N. H., of coronary thrombosis.

Theodore Thompson ✠ Shelbyville, Ill.; Rush Medical College, Chicago, 1897; past president of the Shelby County Medical Society and the Central Illinois District Medical Society; at one time mayor of Shelbyville; served as a captain in the medical department of the U. S. Army during World War I; formerly member of the board of education; formerly on the staff of the Decatur and Macon County Hospital, Decatur; aged 69; died, April 18, of heart disease.

Hubert Spencer Steenberg ✠ U. S. Army, retired, Milwaukee; Milwaukee Medical College, 1902; entered the medical department of the U. S. Army as a captain on Sept. 17, 1920 and was retired on June 20, 1929 for disability not incident to the service; served with the Wisconsin National Guard in Puerto Rico during the Spanish-American War and as medical officer during World War I; aged 65; died, April 26, in the Veterans Administration Facility.

Henry Joseph Hoye, Providence, R. I.; Johns Hopkins University School of Medicine, Baltimore, 1899; member of the Rhode Island Medical Society; fellow of the American College of Surgeons; for many years medical director of the state unemployment relief commission; associate surgeon, St. Joseph's Hospital; consulting surgeon, Rhode Island Hospital; aged 68; died, April 26, of diabetes mellitus and arteriosclerotic heart disease.

Robert Grisham Reaves ✠ Knoxville, Tenn.; University of Virginia Department of Medicine, Charlottesville, 1915; member of the American Academy of Ophthalmology and Otolaryngology; member of the American Board of Otolaryngology; served in the medical department of the U. S. Navy during World War I; part owner of the Reaves-Leach Infirmary; aged 54; died, April 25, in the Fort Sanders Hospital of typhoid.

Jason Newell Robertson, Wolcott, N. Y.; University of Vermont College of Medicine, Burlington, 1877; member of the Medical Society of the State of New York; past president of the Wayne County Medical Society; served for many years as health officer for the village and town of Wolcott; past president of the board of education of Wolcott; medical member of the draft board during World War I; aged 88; died, April 7.

George W. Miel ✠ Denver; Jefferson Medical College of Philadelphia, 1883; an Affiliate Fellow of the American Medical Association; past president of the Medical Society of the City and County of Denver; at one time treasurer of the Colorado State Medical Society; for many years staff surgeon for the Santa Fe Railroad; served at various times as chief and as president of the staff of St. Anthony's Hospital; aged 82; died, April 5.

Percival Gordon White ✠ Los Angeles; McGill University Faculty of Medicine, Montreal, Que., Canada, 1905; fellow of the American College of Physicians; served as a major in the medical department of the U. S. Army in France during World War I; on the staff of the California, Cedars of Lebanon and Good Samaritan hospitals; a founder of the Moore-White Clinic; aged 61; died, April 28.

David Crooker Dow, Cambridge, Mass.; Tufts College Medical School, Boston, 1898; member of the Massachusetts Medical Society; for many years medical examiner of the first Middlesex district; served as a lieutenant in the U. S. Navy during World War I; for many years on the staff of the Cambridge City Hospital; aged 67; died, May 27, of cerebral hemorrhage.

James Prentiss Aylen, Fargo, N. D.; Bellevue Hospital Medical College, New York, 1888; member of the North Dakota State Medical Association and the Western Surgical Association; fellow of the American College of Surgeons; formerly superintendent of the Grafton (N. D.) State School; consultant for the Northern Pacific Railway; aged 78; died, April 29.

Howard Wesley Hassell, Bridgeport, Pa.; Jefferson Medical College of Philadelphia, 1893; member of the Medical Society of the State of Pennsylvania; past president of the Montgomery County Medical Society; medical director of Bucks and Montgomery counties; formerly physician for the Eastern State Penitentiary, Philadelphia; aged 72; died, May 24.

Hillis Hall Hattery, Pendleton, Ore.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1904; served overseas as a captain in the medical department of the United States Army during World War I; aged 61; died, April 25, in St. Anthony's Hospital of hypertensive cardiorenal disease.

Charles Jaeger, Denver; Missouri Medical College, St. Louis, 1888; member of the Colorado State Medical Society; a founder, a member of the advisory board and for many years president of the staff of the Presbyterian Hospital; on the staffs of the Children's, St. Joseph's, Denver and St. Luke's hospitals; aged 78; died, June 5.

Sherman Perry ✠ Winchendon, Mass.; Harvard Medical School, Boston, 1907; member of the New England Obstetrical and Gynecological Society; past president of the Worcester District Medical Society; on the staffs of the Henry Heywood Memorial Hospital, Gardner, and the Millers River Hospital; aged 63; died, April 20.

Paul Eugene Payne, Columbia, S. C.; University of Georgia Medical Department, Augusta, 1919; member of the South Carolina Medical Association; served during World War I; health officer of Columbia; aged 45; died, May 4, in the Columbia Hospital of lobar pneumonia, cirrhosis of the liver and diabetes mellitus.

John Fitzgerald Ryan, Rock Springs, Wyo.; University of Colorado School of Medicine, Denver, 1934; formerly instructor of pathology at the Tulane University of Louisiana School of Medicine, New Orleans; aged 34; died, April 27, at the Wyoming General Hospital of the effects of a lethal drug, self administered.

James Clinton Willis ✠ Shreveport, La.; Vanderbilt University School of Medicine, Nashville, Tenn., 1887; fellow of the American College of Surgeons; past president of the Louisiana State Medical Society; chief surgeon, Tri-State Hospital; aged 77; died, April 26, in the Colonial Hospital, Rochester, Minn.

Benjamin Charles Pilkey, Huron, Ohio; College of Physicians and Surgeons, Baltimore, 1896; served as a first lieutenant in the medical department of the U. S. Army during World War I; formerly county health officer; aged 75; died, April 24, in the Samaritan Hospital, Ashland, of chronic organic heart disease.

Frederick Eugene Vaughan ✠ Mount Kisco, N. Y.; Albany (N. Y.) Medical College, 1909; member of the county board of health; fellow of the American College of Surgeons; on the staff of the Northern Westchester Hospital; aged 57; died, April 14, of cerebral hemorrhage, arteriosclerosis and hypertension.

William Joseph Delahanty ✠ Worcester, Mass.; Dartmouth Medical School, Hanover, N. H., 1883; for many years trustee of the Worcester State Hospital and on the staffs of the Worcester City Hospital and St. Vincent Hospital, where he died, May 10, of arteriosclerosis and gangrene of the foot, aged 84.

Edwin Abner Sayers, Nashville, Tenn.; University of Nashville Medical Department, 1908; member of the Tennessee State Medical Association and the American Association for the Surgery of Trauma; formerly on the staff of the Nashville General Hospital; aged 55; died, April 24.

Henry Martyn Field ✠ Norwood, Mass.; Harvard Medical School, Boston, 1904; served overseas in the medical department of the U. S. Army with rank of lieutenant colonel; on the staff of the Norwood Hospital; aged 66; died, May 20, of coronary occlusion.

Irwin Alexander H. Bottenhorn, Columbus, Ohio; Starling-Ohio Medical College, Columbus, 1909; also a dentist; professor of dentistry, College of Dentistry, Ohio State University; aged 59; died, April 7, in the White Cross Hospital of heart disease.

Claude Allen Symons, Memphis, Tenn.; University of Tennessee College of Medicine, Memphis, 1914; served overseas as a first lieutenant in the medical department of the U. S. Army during World War I; aged 52; died, April 15, of coronary occlusion.

Bruce E. Miles, St. Joseph, Mo.; Ensworth Medical College, St. Joseph, Mo., 1902; member of the Missouri State Medical Association; on the staff of State Hospital number 2; aged 65; died, April 21, in a hospital at Kansas City of coronary occlusion.

James Franklin Scrivner, Irvine, Ky.; University of Louisville Medical Department, 1892; member of the Kentucky State Medical Association; formerly member and chairman of the board of education; aged 71; died, April 13, of chronic nephritis.

William Ransom Campbell, East Smithfield, Pa.; Eclectic Medical Institute, Cincinnati, 1897; member of the Medical Society of the State of Pennsylvania; formerly a captain in the medical corps of the regular U. S. Army; aged 71; died, April 27.

Morris Daniel Silver, Detroit; University of Missouri School of Medicine, Columbia, 1901; College of Physicians and Surgeons, Baltimore, 1902; aged 61; died, April 26, in the Grace Hospital of hypertension and cerebral hemorrhage.

Albert Fowler Rodrick, Swampscott, Mass.; Tufts College Medical School, Boston, 1901; served during the Spanish-American War and World War I; aged 69; died, April 30, in the U. S. Naval Hospital, Chelsea, of coronary thrombosis.

Albert Gallatin Stevens, Cape May, N. J.; Hahnemann Medical College and Hospital of Philadelphia, 1892; at one time mayor of West Cape May; for many years health officer; aged 72; died, April 17, of myocarditis and arteriosclerosis.

Myron M. Metz, Williamsville, N. Y.; University of Buffalo School of Medicine, 1896; member of the Medical Society of the State of New York; vice president of the New York State Health Officers' Association; aged 71; died, April 6.

John Ross Martin, Huntsville, Texas; Kansas City (Mo.) Medical College, 1899; member of the State Medical Association of Texas; county health officer; served during World War I; aged 65; died, April 30, of carcinoma of the colon.

Thomas Albion Stoddard ✠ San Francisco; University of California Medical Department, San Francisco, 1907; member of the American Academy of Orthopaedic Surgeons; formerly health officer of Santa Barbara; aged 62; died, April 7.

George Walter Rogers, Dauphin, Man., Canada; Manitoba Medical College, Winnipeg, 1905; past president of the Manitoba Medical Association; aged 67; died, April 28, in the Dauphin General Hospital of chronic myocarditis.

Bernard William Mast, La Crosse, Wis.; Chicago College of Medicine and Surgery, 1910; member of the State Medical Society of Wisconsin; on the staff of the Grandview Hospital; aged 57; died, April 29, of cerebral hemorrhage.

Paul Best Yates ✠ Columbus, Ohio; Ohio State University College of Medicine, Columbus, 1935; assistant professor of anatomy at his alma mater; aged 40; died, April 26, of injuries received in an automobile accident.

John William Wilkins, Mount Olive, N. C.; Medical College of Virginia, Richmond, 1913; member of the Medical Society of the State of North Carolina; aged 55; died, April 3, in a hospital at Goldsboro of pneumonia.

Orvel Addison Suttle, Mount Vernon, Ill.; Barnes Medical College, St. Louis, 1909; served as a major in the medical department of the U. S. Army during World War I; aged 70; died, April 23, of angina pectoris.

John Louis Morris ✠ Princeton, Ind.; Jefferson Medical College of Philadelphia, 1896; past president of the Gibson County Medical Society; formerly county coroner; aged 73; died, April 24, of coronary occlusion.

Freeman Hubert Sanders, Spartanburg, S. C.; Atlanta Medical College, 1915; member of the South Carolina Medical Association; aged 50; died, April 3, in the Spartanburg General Hospital of gastric hemorrhage.

Reuben Dorsey Williamson, Castroville, Texas; Memphis (Tenn.) Hospital Medical College, 1898; member of the State Medical Association of Texas; aged 66; died, April 2, in the Santa Rosa Hospital, San Antonio.

James Monroe Sleicher, Chehalis, Wash.; Gross Medical College, Denver, 1888; Kentucky School of Medicine, Louisville, 1905; member of the Washington State Medical Association; aged 88; died, April 6.

Oscar Stenberg ✠ Spokane, Wash.; Trinity Medical College, Toronto, Ont., Canada, 1902; on the staffs of the Sacred Heart, Deaconess and St. Luke's hospitals; aged 67; died, April 24, in Rochester, Minn.

Isaac Rendall Strawbridge ✠ Philadelphia; Medico-Chirurgical College of Philadelphia, 1903; on the staff of the National Stomach Hospital; aged 62; died, April 12, of hypertensive cardiovascular disease.

Charles Huber, Harrison, Ohio; Medical College of Ohio, Cincinnati, 1881; formerly mayor of Harrison and member of the board of education; aged 87; died, April 4, in the Deaconess Hospital, Cincinnati.

John Chesley Stewart ✠ Atlanta, Ga.; Atlanta School of Medicine, 1910; examining physician for the Selective Service System; on the staff of the Grady Hospital; aged 64; died, April 9, of angina pectoris.

James Gwynn Staples ✠ Gorgas, Ala.; University of Louisville (Ky.) Medical Department, 1901; aged 66; died, April 20, in a hospital in Birmingham of tumor of the right kidney, type undetermined.

Paul Lindsay Scott, Toronto, Ont., Canada; University of Toronto Faculty of Medicine, 1900; professor in the department of materia medica at the Ontario College of Pharmacy; aged 73; died, April 3.

William Francis Logan, Kansas City, Mo.; Kansas City Hahnemann Medical College, 1911; veteran of the Spanish-American War and World War I; aged 69; died, April 10, in St. Luke's Hospital.

Carl Sinclair Moore, La Grande, Ore.; Jefferson Medical College of Phladelphia, 1913; member of the Oregon State Medical Society; served during World War I; aged 53; died in April in Portland.

Joshua Leon Yeagley, Waldron, Mich.; Toledo (Ohio) Medical College, 1901; member of the Michigan State Medical Society; aged 68; died, April 12, of injuries received in an automobile accident.

Berta Wechsler, Columbus, Ohio; Julius-Maximilians-Universität Medizinische Fakultät, Würzburg, Bavaria, Germany, 1918; member of the Ohio Medical Association; aged 48; died, April 16.

Thomas Richard Kennerdell, Cleveland; Western Reserve University Medical Department, Cleveland, 1909; served during World War I; on the staff of the Grace Hospital; aged 58; died, April 23.

Richard E. Howard, Fort Lauderdale, Fla.; Lincoln (Neb.) Medical College of Cotner University, 1904; formerly professor of bacteriology and histology at his alma mater; aged 73; died, April 7.

Gertrude Broeksmit, Cedar Rapids, Iowa; Woman's Medical College of the New York Infirmary for Women and Children, New York, 1882; aged 82; died, April 26, of coronary thrombosis.

Jefferson D. Hopper, Jackson, Tenn.; Kentucky School of Medicine, Louisville, 1892; member of the Tennessee State Medical Association; aged 80; died, April 22, of cerebral sclerosis.

Isaac Harter Moore, Seattle; University of Pennsylvania Department of Medicine, Philadelphia, 1878; member of the Washington State Medical Association; aged 87; died, April 12.

Donald Stuart MacNaughton, Brooklyn; Long Island College Hospital, Brooklyn, 1903; member of the Medical Society of the State of New York; aged 63; died, April 24.

Neal Matlock ✠ Medora, Ind.; Kentucky School of Medicine, Louisville, 1901; past president of the Jackson County Medical Society; aged 64; died, April 27, of coronary occlusion.

James Carlyle Johnstone, Imola, Calif.; Loyola University School of Medicine, Chicago, 1917; aged 78; died, April 21, in the Napa State Hospital of chronic myocarditis.

James Coleman Winn, Gilmer, Texas; Memphis (Tenn.) Hospital Medical College, 1913; owner of the Elmwood Sanitarium; aged 72; died, April 4, of coronary occlusion.

Robert Smith Allen, Gunnison, Colo.; Denver College of Medicine, 1900; member of the Colorado State Medical Society; aged 68; died, April 14, of angina pectoris.

Isabella Florence Kelso, Waterloo, Iowa; State University of Iowa College of Homeopathic Medicine, Iowa City, 1893; aged 86; died, April 22, of heart disease.

Hendery Allison ✠ Kingsville, Texas; University of Louisville (Ky.) Medical Department, 1899; aged 66; died, April 21, of heart disease and cerebral hemorrhage.

Louis J. Smith, Cleveland; Western Reserve University Medical Department, Cleveland, 1887; aged 77; died, April 3, of coronary embolism and arteriosclerosis.

Thomas Reading, Hatboro, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1888; aged 77; died, April 24, of carcinoma of the bladder.

Frederick Carl Belzig, Chicago; Chicago College of Medicine and Surgery, 1914; member of the Illinois State Medical Society; aged 52; died recently.

Charles M. Thruston, San Francisco; Louisville (Ky.) Medical College, 1890; aged 73; died, March 16, of bronchopneumonia, pyelitis and cystitis.

Emily Frances Wells, Burbank, Calif.; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1879; aged 87; died recently.

Moses Carlysle Sycle, Richmond, Va.; University College of Medicine, Richmond, 1903; served during World War I; aged 61; died, March 24.

Joel E. Johnson, Joplin, Mo.; Vanderbilt University School of Medicine, Nashville, Tenn., 1890; aged 77; died, March 27, in the Freeman Hospital.

Edward Perrone Overby, East Point, Ga.; Southern Medical College, Atlanta, 1883; aged 87; died, April 1, of cerebral hemorrhage.

Sara Holmes Oram, Apalachin, N. Y.; Hahnemann Medical College and Hospital, Chicago, 1887; aged 82; died, April 7, of arteriosclerosis.

Herbert Mason Maynard ✠ Ionia, Mich.; Grand Rapids (Mich.) Medical College, 1907; aged 64; died, April 27, of coronary occlusion.

Doan Parks, Galesburg, Ill.; Hahnemann Medical College and Hospital, Chicago, 1890; aged 72; died, April 29, of coronary thrombosis.

William Patrick Morse, Princeton, Ky.; Hospital College of Medicine, Louisville, 1907; aged 67; died, April 24, of cerebral hemorrhage.

John Lee Pickens, Pensacola, Fla.; Meharry Medical College, Nashville, Tenn., 1911; aged 56; died, April 23, of myocarditis.

B. L. Ousley, Christiana, Tenn.; University of Tennessee Medical Department, Nashville, 1901; aged 69; died, April 2.

James W. Yancey, Ward, Ark. (licensed in Arkansas in 1903); aged 81; died, April 27, in a hospital at Little Rock.

DIED IN MILITARY SERVICE

Joseph Anthony Macca, Forest Hills, N. Y.; Georgetown University School of Medicine, Washington, D. C., 1932; member of the Medical Society of the State of New York; formerly on the staffs of the Mary Immaculate and Queens General Hospital, Jamaica; was called to active duty as a first lieutenant in the medical reserve corps of the U. S. Army in May 1941; was stationed at Camp Blanding, Fla., and later at Fort Dix, N. J., where he died, May 29, of pulmonary embolism following an operation three weeks previously, aged 37.

Correspondence

GRAY HAIR OR BALD HEADS

To the Editor:—Among middle aged men it is rather uncommon to see a man who is both bald and gray. He is either bald, without grayness in the fringe of hair at the back of his head and at the temples, or he is gray with a good supply of hair all over his head. If he is both gray and bald it will be found that the baldness usually came first. Premature aging is likely to be present in such instances. Fairly young men may be gray or bald without other physical evidences of premature aging. A man may be quite old with numerous evidences of extreme senility and yet be neither gray nor bald.

For a number of years laboratory workers have noted that animals kept on synthetic diets became more or less gray and that the color of the hair returned to normal after certain of the so-called factors of vitamin B complex were added to the diets. Ralli and her associates placed a group of rats on diets deficient in the "filtrate factor" of vitamin B complex. Some of these rats were given only a small amount of sodium chloride; the others were given large amounts of sodium chloride. The fur of the rats on the low salt intake became gray, on the average, fifty-five days earlier than did that of the animals on the high salt diet.

While graying of the hair may be due to a vitamin deficiency, there is no evidence as yet to indicate that baldness is due to the same cause or causes as grayness. Whatever the cause of gray hair, it seems evident that it is not the same as the cause of baldness.

There is another type of grayness observed in the man who is gray at the temples only; he is rarely bald, but the hair at the top of his head may be thinner than normal. It is unusual to see a man under 55 who does not fall into one of these three groups: (1) bald on top, (2) gray without baldness, (3) gray at the temples and thinner on top.

Why does a woman often become gray but rarely bald?

Why is the man doing manual labor less likely to have white hair in the temporal region than the hard worked or worried businessman?

By what metabolic processes, endocrine, vitamin or neurogenic, are these changes induced? Would studies of groups of persons belonging to the bald, the gray or those gray only at the temples give a lead?

Calcium pantothenate, iodine and sodium chloride have been advocated in the treatment of graying of the hair. These remedies, however, seem to be of slight if any value in human beings. Nor has a worth while remedy for baldness yet been suggested.

Although little or nothing at present can be done to prevent the changes which bring about baldness or grayness, it can be predicted with a fair degree of accuracy that the man who is losing considerable hair from the top of his head will become bald before he is gray, that the one who is becoming gray all over his head will be slow in becoming bald, and that the man who becomes gray chiefly at the temples is not likely to become bald. Old age, of course, alters all these prognostications.

EDGAR G. BALLENGER, M.D., Atlanta, Ga.

[NOTE.—Obviously Dr. Ballenger offers impressions unsupported by statistical data. In the solution to some of the problems he suggests may lie the keys to a better understanding of the processes of aging.—ED.]

"TUBERCULOSIS AMONG MEDICAL STUDENTS"

To the Editor:—In the May 16 issue of THE JOURNAL appears a current comment on "Tuberculosis Among Medical Students," and in the discussion the emphasis is placed on the environment of the students. Although "contact with patients" is mentioned, it seems to me that this is the chief source of tuberculosis in students who are clumsy and careless in their first approach to the ill but undiagnosed patient. I believe that it is in the second and third years particularly that tuberculosis has its greatest incidence among medical students. It is in this period that the student is struggling to acquire a technic in physical diagnosis.

As a teacher of physical diagnosis at Harvard Medical School I am amazed, startled and disgusted with the manner in which a young man with a stethoscope will allow a total stranger to cough directly into his face. Yet with each second year group I plead with the students that self protection is still the first law of nature.

In textbooks and lectures this aspect of our hazardous work is seldom presented in an impressionable way. A question I asked in the examinations this year was "Describe protective technics employed by doctors in examining patients." The answers ranged from immunization to legal aid, but they all included rigid "self protection."

EARLE M. CHAPMAN, M.D., Boston.

"NONSPLINTING TREATMENT OF FRACTURES OF ELBOW JOINT"

To the Editor:—I have read with a great deal of concern the article appearing in the March 21 issue of THE JOURNAL by Dr. A. A. Neuwirth, entitled "Nonsplinting Treatment of Fractures of the Elbow Joint."

It seems that in these times it will be unavoidable that a great many traumatic conditions must be treated by many physicians who have not been especially trained in this line of procedure. For this reason I think it is particularly important that the undoubted advantage incident to anatomic reposition should not be unduly minimized. Certain it is that it is not always possible to obtain anatomic reposition; but equally certain it is that, if anatomic reposition can be obtained without interference with function, this should be the goal, particularly in growing children.

I question very seriously the advisability of oversimplification of the problem of treating fractures about the elbow and of the advisability of lumping them all into one group. One must admit that a series of 6 cases, however fortunate the end result, hardly justifies the categorical statement "It is my opinion that the nonfixing type of treatment in fractures of the elbow may be applied in all cases with profit and with greater restoration of normal function and should be the rule, with fixation and splinting the exception."

It may well be that nonsplinting may be the answer to many types of fracture of the elbow. Certainly, I believe that there are many types of fractures to which it will not apply. Let us hope that it will not be adopted indiscriminately until more research has been carried out as to its indications and advantages.

D. H. O'DONOGHUE, M.D., Oklahoma City.
Assistant Professor of Orthopedic Surgery, University of Oklahoma School of Medicine.

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

BOARDS OF MEDICAL EXAMINERS
BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Examinations of boards of medical examiners and boards of examiners in the basic sciences were published in THE JOURNAL, June 20, page 671.

NATIONAL BOARD OF MEDICAL EXAMINERS

NATIONAL BOARD OF MEDICAL EXAMINERS: *Part III.* Various centers, June or July. Exec. Sec., Mr. Everett S. Elwood, 225 S. 15th St., Philadelphia.

EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF DERMATOLOGY AND SYPHILOLOGY: *Oral. Groups A and B.* Cleveland, Jan. 14-15, 1943. Final date for filing application is Dec. 7. *Written.* Various centers, Nov. 16. Final date for filing application is Oct. 5. Sec., Dr. C. Guy Lane, 416 Marlboro St., Boston.

AMERICAN BOARD OF INTERNAL MEDICINE: *Written.* Oct. 19. Final date for filing application is Sept. 1. Sec., Dr. William S. Middleton, 1301 University Ave., Madison, Wis.

AMERICAN BOARD OF OPHTHALMOLOGY: *Oral.* Chicago, Oct. 9-10. Sec., Dr. John Green, 6830 Waterman Ave., St. Louis.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY: *Oral and Written.* Chicago, Jan. 9-10. Final date for filing application is Nov. 1. Sec., Dr. Guy A. Caldwell, 3503 Prytania St., New Orleans.

AMERICAN BOARD OF PATHOLOGY: *Oral and Written.* Richmond, Va., Nov. 9-10. Final date for filing application is Sept. 1. Sec., Dr. F. W. Hartman, Henry Ford Hospital, Detroit.

AMERICAN BOARD OF PEDIATRICS: *Written.* Locally, Sept. 18. *Oral.* Chicago, Nov. 2-3. Final date for filing application is July 1. Sec., Dr. C. A. Aldrich, 707 Fullerton Ave., Chicago.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY: New York, December. Final date for filing application is Oct. 1. Sec., Dr. Walter Freeman, 1028 Connecticut Ave. N.W., Washington, D. C.

AMERICAN BOARD OF SURGERY. *Part I.* Oct. 7. Final date for filing application is Aug. 22. Sec., Dr. J. Stewart Rodman, 225 S Fifteenth St., Philadelphia.

AMERICAN BOARD OF UROLOGY: If a sufficient number of applications are received an examination will be held in the east at the same time or shortly after one of the national meetings. Sec., Dr. Gilbert J. Thomas, 1409 Willow St., Minneapolis.

Vermont February Report

The Vermont State Board of Medical Registration reports the oral and written examination for medical licensure held at Burlington, Feb. 10-12, 1942. The examination covered 12 subjects and included 90 questions. An average of 75 per cent was required to pass. Five candidates were examined, all of whom passed. Three physicians were licensed to practice medicine by endorsement. The following schools were represented:

School	PASSED	Year Grad.	Number Passed
Harvard Medical School		(1940)	1
Univ. of Rochester School of Medicine and Dentistry		(1940)	1
Woman's Medical College of Pennsylvania		(1926)	1
University of Vermont College of Medicine		(1936)	1
Kongelige Frederiks Universitet Medisinske Fakultet, Oslo		(1924)	1

School	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
University of Kansas School of Medicine		(1936)	Kansas
University of Vermont College of Medicine		(1940)	N. B. M. Ex.
University of Toronto Faculty of Medicine		(1925)	New Jersey

Arizona January and April Reports

The Arizona State Board of Medical Examiners reports the written examination for medical licensure held at Phoenix, Jan. 6-7, 1942. The examination covered 10 subjects and included 100 questions. An average of 75 per cent was required to pass. One candidate was examined and passed. Two physicians were licensed to practice medicine by reciprocity. The following schools were represented:

School	PASSED	Year Grad.	Number Passed
Creighton University School of Medicine		(1940)	1

School	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Michigan Medical School		(1925)	Michigan
Jefferson Medical College of Philadelphia		(1898)	R. Island

The Arizona State Board of Medical Examiners also reports the written examination for medical licensure held at Phoenix, April 7-8, 1942. The examination covered 10 subjects and included 100 questions. An average of 75 per cent was required to pass. Three candidates were examined and passed. Two physicians were licensed to practice medicine by reciprocity and two physicians so licensed on endorsement of credentials of the National Board of Medical Examiners. The following schools were represented:

School	PASSED	Year Grad.	Number Passed
Rush Medical College		(1939)	1
Harvard Medical School		(1939)	1
University of Texas Faculty of Medicine		(1940)	1

School	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Arkansas School of Medicine		(1936)	Arkansas
University and Bellevue Hospital Medical College		(1921)	New York

School	LICENSED BY ENDORSEMENT	Year Grad.
Johns Hopkins University School of Medicine		(1926)
University of Wisconsin Medical School		(1936)

Nevada Reciprocity Report

The Nevada State Board of Medical Examiners reports 3 physicians licensed to practice medicine by reciprocity and 1 physician so licensed on endorsement of credentials of the National Board of Medical Examiners on February 2. The following schools were represented:

School	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Georgia Medical Department		(1915)	Georgia
Tufts College Medical School		(1923)	New York
Long Island College Hospital		(1926)	New York

School	LICENSED BY ENDORSEMENT	Year Grad.
University of Illinois College of Medicine		(1926)

Rhode Island April Report

The Rhode Island Board of Examiners in Medicine reports the written examination for medical licensure held at Providence, April 2-3, 1942. The examination covered 9 subjects and included 60 questions. An average of 80 per cent was required to pass. Seven candidates were examined, all of whom passed. The following schools were represented:

School	PASSED	Year Grad.	Number Passed
Harvard Medical School		(1937)	1
Tufts College Medical School		(1939), (1941)*	2
St. Louis University School of Medicine		(1940)	1
Jefferson Medical College of Philadelphia		(1941)*	1
Temple University School of Medicine		(1940)	1
Woman's Medical College of Pennsylvania		(1933)	1

*Licenses have not been issued.

Oregon January Report

The Oregon State Board of Medical Examiners reports the written examination for medical licensure held at Portland, Jan. 21-23, 1942. The examination covered 12 subjects and included 84 questions. An average of 75 per cent in each subject was required to pass. Nine candidates were examined, all of whom passed. The following schools were represented:

School	PASSED	Year Grad.	Number Passed
University of Oregon Medical School		(1939, 2), (1940, 6)	8
University of Wisconsin Medical School		(1940)	1

California January Report

The Board of Medical Examiners of the State of California reports 27 physicians licensed to practice medicine by reciprocity and 5 physicians so licensed by endorsement from January 2 through January 30. The following schools were represented:

School	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Chicago College of Medicine and Surgery		(1916)	Wisconsin
College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois		(1907)	S. Dakota
Northwestern University Medical School		(1904) (1905) South Dakota, (1911) Idaho	Iowa,
The Hahnemann Medical College and Hospital, Chicago		(1919)	Colorado
University of Illinois College of Medicine		(1922) (1926), (1933) Illinois, (1933) Minnesota	Indiana,
University of Louisville School of Medicine		(1937)	Kentucky
Johns Hopkins University School of Medicine		(1936)	Maryland
University of Minnesota Medical School		(1926), (1931)	Minnesota

Missouri Medical College	(1896)	Missouri
Creighton University School of Medicine	(1924)	Nebraska
University of Nebraska College of Medicine	(1926), (1930), (1940)	Nebraska
Columbia University College of Physicians and Surgeons	(1916) New Jersey, (1917)	New York
Cornell University Medical College	(1910) (1934)	Nevada, New York
University of Rochester School of Medicine and Dentistry	(1939)	New York
Western Reserve University School of Medicine	(1935)	Ohio
Hahnemann Medical College and Hospital of Philadelphia	(1933)	Washington
McGill University Faculty of Medicine	(1900)	S. Dakota

School	LICENSED BY ENDORSEMENT	Year Gard.	Endorsement of
College of Medical Evangelists		(1938)	N. B. M. Ex.
Bennett Medical College		(1908), (1912)	U. S. Army
Cornell University Medical College		(1935)	N. B. M. Ex.
University of Vermont College of Medicine		(1930)	N. B. M. Ex.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Malpractice: Limitation of Actions in Relation to Unauthorized Operation.—An account for medical services owing by defendant Dray was assigned to the Physicians' and Dentists' Business Bureau. In a suit on the account, the physician who rendered the services was made an additional defendant at the instance of Dray, who filed a cross complaint against the physician for damages. A demurrer to the cross complaint and to a subsequently filed amended cross complaint was sustained and Dray appealed to the Supreme Court of Washington.

The cross complaint alleged that the defendant Dray consulted the physician, who advised her to go to a hospital for a laboratory test; that at the hospital she was placed on an operating table and anesthetized, and that while under the influence of the anesthetic the physician performed "an operation upon her against her will and without her consent, in which he removed her uterus." The operation was performed in March 1936 and the cross complaint was filed Dec. 1, 1938. The demurrer was sustained on the ground that the statute of limitations had run against the cause of action, the trial court holding that the cause of action stated was for an assault and battery which was barred by the two year statute of limitations applicable to such actions.

While an unauthorized operation is, in contemplation of law, an assault and battery, it also constitutes malpractice, the court said, even though negligence is not charged, and the general rule is that in the absence of a special statute of limitations malpractice actions are controlled by the limitations applicable to actions for damages generally. Courts which have recognized an unauthorized operation as an assault and battery have nevertheless held that, in contemplation of the statute of limitations, such an operation amounts to malpractice, the cause of action for which is subject to the statute of limitations applying generally to actions for damages to the person. When a plaintiff has several remedies for the same cause of action, the fact that one or more of his remedies have become barred will not affect his right to any of the others which are not barred. The statutes of Washington allow three years for the commencing of an action for damages for injuries to the person. Accordingly, the Supreme Court concluded that the cross complaint had been filed in time even though the two year statute for damages for an assault and battery had already run. Nor was the cause of action stated in the amended cross complaint barred although it was filed more than three years subsequent to the operation. While it is apparent, continued the court, that an attempt was made in the later complaint to set up a cause of action ex contractu, the cause stated still sounded in tort. No new cause of action having been set up, the statute of limitations did not bar the action even though the amended cross complaint was filed more than three years after the cause of action arose. The judgment of the trial court was therefore reversed and the cause remanded with direction to overrule the demurrer.—*Physicians' and Dentists' Business Bureau v. Dray, 111 P. (2d) 568 (Wash., 1941).*

Harrison Narcotic Act: Exempt Preparations Administered by Physician; Record Keeping Requirement.—The appellant, a licensed physician of Hawaii, administered preparations, such as paregoric and cough syrup, containing a limited amount of narcotics to patients whom he personally attended. Because he kept no records of such transactions, he was convicted of violating the Harrison Narcotic Act. The conviction was upheld by the United States circuit court of appeals, ninth circuit, and the case came before the United States Supreme Court for review.

Section 6 of the Harrison Narcotic Act, after exempting certain attenuated narcotic preparations from the act, contains the following proviso:

> "*Provided further*, that any manufacturer, producer, compounder, or vendor (including dispensing physicians) of the preparations and remedies mentioned in this section lawfully entitled to manufacture, produce, compound, or vend such preparations and remedies, shall keep a record of all sales, exchanges, or gifts of such preparations and remedies. . . ."

Congress, in the opinion of the court, by the use of the words "dispensing physicians," meant to exclude physicians administering to patients whom they personally attend. That not all physicians are required to keep records was manifest to the court because of the use of the qualifying adjective "dispensing." A physician, to come within the record keeping requirement, must be one who manufactures, produces, compounds or vends the drugs, or possibly only one who vends if the parenthetical phrase applies only to "vendor." This construction, the court continued, was borne out by a consideration of the act as a whole. The word "administer" more appropriately describes the activities of a physician in personal attendance than does the word "dispense." Admittedly, the court pointed out, the words "dispense" and "dispensing" are used in several senses in the act, but Congress evidently was aware of the differentiation between "administer" and "dispense," for when it wished to include all possible functions of physicians with respect to drug distribution it used the two terms in conjunction. Furthermore, in dealing with true narcotics, Congress unequivocally exempted physicians from record keeping when in personal attendance on patients. It was difficult for the court to perceive why a different requirement should obtain when a physician, under similar circumstances, administers preparations containing only a limited amount of narcotics. A construction of the parenthetical phrase "(including dispensing physicians)" as encompassing only physicians who would be covered by the word "vendor" did not, the court said, imply that Congress was tautologic but rather that it acted cautiously to preclude any contention that physicians selling drugs were not "vendors" simply because of their professional status.

On all the evidence, the Supreme Court concluded that the physician was not a "dispensing physician" within the meaning of the proviso and that his failure to keep records of the exempt narcotic preparation he administered constituted no violation of the act. The judgment of conviction was reversed and the cause remanded for further proceedings.—*Young v. United States, 119 F. (2d) 399; 62 S. Ct. 510 (1942).*

Society Proceedings

COMING MEETINGS

American Physiotherapy Association, Lake Geneva, Wis., June 28-July 3. Miss Evelyn Anderson, Stanford University, Calif., Secretary.

Minnesota State Medical Association, Duluth, June 29-July 1. Dr. B. B. Souster, 493 Lowry Medical Arts Bldg., St. Paul, Secretary.

Montana, Medical Association of, Missoula, July 8-10. Dr. Thomas F. Walker, 206 Medical Arts Bldg., Great Falls, Secretary.

Washington State Medical Association, Spokane, Aug. 17-19. Dr. V. W. Spickard, 1305 Fourth Ave., Seattle, Secretary.

West Virginia Medical Association, Huntington, July 13-15. Mr. Charles Lively, 1031 Quarrier St., Charleston, Executive Secretary.

Wyoming State Medical Society, Cheyenne, Aug. 16-18. Dr. Marshall C. Keith, Capitol Bldg., Cheyenne, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1932 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Journal of Ophthalmology, Cincinnati

25:261-386 (March) 1942

Lipid Degeneration of Cornea: Report of Case. H. C. Donahue, Boston. —p. 261.

Moore's Subjective "Lightning Streaks." F. H. Verhoeff, Boston. —p. 265.

Procedures in Intracapsular Cataract Extraction: New Method. D. B. Kirby, New York.—p. 269.

Periphlebitis and Phlebitis Retinae: Case Report. G. de Ocampo, Manila, Philippine Islands.—p. 278.

Vitamin Therapy in Ophthalmology. A. M. Yudkin, New Haven, Conn. —p. 284.

Muscle Inbalance in Myopia. W. W. Baum, Salem, Ore.—p. 291.

Cultural Studies on Patients with Uveitis and Other Eye Diseases. C. Berens, S. Rothbard and D. M. Angevine, New York.—p. 295.

Regarding Early Detection of Avitaminosis A by Gross or Biomicroscopic Examination of Conjunctiva. M. L. Berliner, New York.—p. 302.

Use of Doryl in Treatment of Glaucoma. S. T. Clarke, Boston.—p. 309.

Studies on Infectivity of Trachoma: XI. Effect of Sulfanilamide on Virus. L. A. Julianelle, St. Louis, and J. E. Smith, Rolla, Mo.—p. 317.

Psychologic Problems in Ophthalmologic Diagnosis. W. Bab, San Francisco.—p. 321.

American Journal of Tropical Medicine, Baltimore

22:121-190 (March) 1942

Sarcosporidiosis with Parasites Found in Heart: Case. H. R. Gilmore Jr., B. H. Kean and F. M. Posey Jr., Ancon, Canal Zone.—p. 121.

Tropical Neurasthenia. A. C. Reed, San Francisco.—p. 127.

*Probability of Detecting Intestinal Protozoa by Successive Stool Examinations. W. G. Sawitz and E. C. Faust, New Orleans.—p. 131.

Influence of Bacterial Flora on Cultivation of Endameba Histolytica. B. C. Chinn, L. Jacobs, Lucy V. Reardon and C. W. Rees, Washington, D. C.—p. 137.

*Evaluation of Culture Method as Aid in Diagnosis of Amebiasis. H. Tsuchiya, St. Louis.—p. 147.

Guinea Worm, Dracunculus Insignis (Leidy 1858), Common Parasite of Raccoons in East Texas. A. C. Chandler, Houston, Texas.—p. 153.

Human Intestinal Myiasis Due to Syrphid Larvae: Report of Additional Case (Eristalis Tenax). J. C. Swartzwelder and S. J. Cali, New Orleans.—p. 159.

Periodicity in Plasmodium Vaughani. R. D. Manwell and J. M. Nadler, Syracuse, N. Y.—p. 165.

Detecting Intestinal Protozoa.—Six normally passed stools from each of 118 children were examined by Sawitz and Faust by the two direct and the zinc sulfate concentration technics for intestinal parasites. Of the 708 specimens examined, Endameba histolytica was recovered from the specimens of 63 children, Endameba coli from 74, Endolimax nana from 100, Giardia lamblia from 91, Chilomastix mesnili from 53, Trichomonas hominis from 21, Diendameba fragilis from 6 and Iodameba bütschli from 5. By the direct iodine or hematoxylin stained fecal film technic 72 of the possible 378 specimens were found positive for Endameba histolytica; that is, less than one in five. By their combination with the zinc sulfate centrifugal flotation technic about one out of three or four infections was detected in a single examination. The efficiency of the iodine or hematoxylin stained film for the nonpathogenic protozoa was one in four, but one of these technics combined with zinc sulfate centrifugal flotation technic gave a probability of one in two.

Diagnosis of Amebiasis by Culture Method.—Tsuchiya submitted the stools from 100 patients with acute or chronic dysentery to the direct microscopic, the concentration and the cultural laboratory procedure. Of 14 acute cases the respective methods were diagnostic in 14, 14 and 13, and respectively in 72, 77 and 84 of 86 chronic cases. The chronic cases when broken down showed 15 clinical cases, 50 carriers with a large number of cysts and 21 carriers with a few cysts, and the three procedures were diagnostic in 12, 13 and 15 of the clinical cases, in 49, 50 and 49 of first group of carriers, and in 11, 14 and 20 of the other carrier group. The culture method should be included in the routine examination of stools for Endameba histolytica. It increases the percentage of positives when employed with other methods and serves as a check on negatives otherwise obtained.

Annals of Internal Medicine, Lancaster, Pa.

16:415-632 (March) 1942

*Exophthalmometric Measurements in Patients with Thyroid Diseases with Some Discussion of Their Significance. C. Galli-Mainini, Buenos Aires, Argentina.—p. 415.

*Digitalis in Prevention of Recurrent Cardiac Failure in Patients with Sinus Rhythm. M. Sokolow, San Francisco; H. B. Weinberg, Davenport, Iowa; J. L. Plaut and L. N. Katz, Chicago.—p. 427.

Gaucher's Disease: I. Case with Hemolytic Anemia and Marked Thrombopenia; Improvement After Removal of Spleen Weighing 6,822 Gm. II. Lipid Analysis of Gaucher's Spleen. H. Mandelbaum, L. Berger, M. Lederer, A. E. Sobel and I. A. Kaye, Brooklyn.—p. 438.

Electroencephalographic Changes During Hyperventilation in Epileptic and Nonepileptic Disorders. N. Q. Brill and Herta Seidemann, New York.—p. 451.

Certain Infections in Background of Patients wtih Coronary Occlusion. J. T. King, Baltimore.—p. 462.

Heterophile Antibody Reaction Caused by Bacterial Infection. S. Bornstein, New York.—p. 472.

*Treatment of Delirium Tremens with Faradic Shock Therapy: New Approach Based on Psychobiologic Concept. N. J. Berkwitz, Minneapolis.—p. 480.

*Cardiopericardiopexy: Surgical Treatment of Coronary Arterial Disease by Establishment of Adhesive Pericarditis. S. A. Thompson and M. J. Raisbeck, New York.—p. 495.

Electrostethography: I. Cathode Ray Visualization of Lung Chest Sounds. F. L. Dunn, W. E. Rahm Jr. and R. M. Cochran, Omaha. —p. 521.

Liver Function in Menstruation. R. Heilig and N. L. Kantiengar, Mysore, South India.—p. 538.

Exophthalmometric Measurements.—The degree of proptosis in various stages and types of exophthalmic goiter was determined by Galli-Mainini in 126 patients by actual exophthalmometric measurements. For control the eyes of 50 healthy persons were measured and the readings fell between 14 and 17.5 mm. All measurements over the latter figure were considered to be exophthalmic. The measurements of 13 patients with nontoxic nodular goiter, giving no past history of exophthalmos and not appearing to have it at the time of examination, ranged from 14 to 18 mm. Only 1 was above the higher range of normal. Those of 3 patients with toxic nodular goiter were between 15 and 22 mm. The measurements of 58 thyrotoxic patients with diffuse goiters, 40 of whom gave a history of exophthalmos and all of whom appeared to have it at the time of examination, ran from 18 to 25 mm. Twenty-one of 34 with spontaneous myxedema having actual measurements from 15 to 25 mm. had definite exophthalmos by measure. The measurements of 4 with myxedema following thyroidectomies for toxic goiter without exophthalmos were within normal limits. All 14 with myxedema following thyroidectomy for toxic goiter with exophthalmos showed exophthalmos of 19 to 27 mm. at the time of measurement.

Digitalis in Prevention of Recurrent Cardiac Failure.—Sokolow and his colleagues investigated the probability of digitalis preventing recurrent cardiac failure in a recovered ambulatory patient. Four patients who had previously had cardiac failure with a regular rhythm and who were compensated on the usual therapy were observed for thirty-one to sixty weeks; 3 had hypertensive heart disease and 1 had arteriosclerotic heart disease. Each was kept on a comparable controlled regimen of activity, salt, fluid and calory intake. The only variable was the administration or the omission of digitalis. Cardiac failure always recurred when digitalis was withheld. Administration of digitalis tended to prevent the development of failure in patients with a regular sinus rhythm. Digitalis also proved of value in relieving the congestive failure that occurred when the drug was withdrawn. In 3 patients the cardiac reserve became so diminished that irreversible cardiac failure occurred in spite of treatment. The vital capacity, venous pressure, response of venous pressure to compression of the right upper quadrant, circulation time and weight when correlated with the clinical signs proved of value in determining

the trend of the circulatory status. Continuous digitalization is of value in preventing recurrent cardiac failure in ambulatory patients with regular sinus rhythm. It is not wise to omit giving digitalis to patients with diminished cardiac reserve who have had cardiac failure previously, even though they are free from symptoms.

Treatment of Delirium Tremens.—Berkwitz used faradic shock for the treatment of 33 patients less than 55 years of age with uncomplicated delirium tremens following alcoholism. One electrocardiograph electrode was applied to the forehead and another to the back of the neck. A series of fifteen subconvulsive electrical shocks was given with a faradic current of half a second duration at intervals of half a second. The patient received an average current of about 10 milliamperes in each shock. Immediately after electrical shock an intravenous injection of 8 to 10 cc. of a 5 per cent solution of pentothal sodium to produce general anesthesia for three to five minutes was given. For a few minutes after awakening the patient was usually confused and poorly coordinated. As the effects of the pentothal sodium wore off, the patient's apprehensiveness, hallucination and tremors diminished or were absent. Shock treatment was repeated daily until all apparent symptoms of delirium disappeared. Forty-three similar patients were given only the routine medical treatment. Among the 76 patients there was only 1 death of a patient who did not receive faradic shock treatment. The mean number of days that strong sedation was required by the group receiving shock treatment was two and twenty-one hundredths as compared with five and five hundredths days. After the first treatment strong sedation was needed only for six tenths of a day. This low figure strongly indicates the effectiveness of the treatment. Experience with the faradic treatment has shown that the necessary "protective" measures (chemical and physical restraints) often aggravate or prolong the condition. Shock therapy promptly removes the acute psychotic symptoms in most cases and consequently lessens the need for these undesirable protective measures.

Cardiopericardiopexy.—Thompson and Raisbeck outline the technic of cardiopericardiopexy, or the production of adhesive pericarditis by introducing sterile talc into the pericardial sac. Animal experimentation has revealed that the pericardium is able to furnish a collateral circulation to the myocardium that is sufficient to overcome the ischemia produced by sudden complete ligation of a main branch of the coronary artery. Collateral myocardial circulation is produced by any or all of the following ways: (1) formation of new channels between the main coronary arteries, (2) dilation and proliferation of already existing intercoronary channels and (3) formation of new extracardiac channels from the newly adherent pericardium. The beneficial effects of this operation may be due to the formation of intracardiac collaterals resulting from the myocardial reaction as well as to the formation of new extracardiac collaterals from the adherent pericardium. Although the reaction subsides and the operative stimulation ceases, the original impetus may accelerate the process of spontaneous collateral formation to a rate equal to or greater than the occlusive process. Patients selected for this operation are those with a typical anginal syndrome related to effort, those with objective physical electrocardiographic and roentgen evidence of coronary and myocardial disease and those in whom improvement does not follow fairly prolonged medical treatment. A previous coronary occlusion is not considered a contraindication, but sufficient time must have elapsed to permit healing of the infarct and there must be no evidence of activity. A group of the author's patients who were completely incapacitated have been relieved of their anginal pain and have returned to their former occupation. The relief from angina is complete in some and partial in others. No patient has failed to show symptomatic relief and a definite increase in his exercise tolerance. Follow-up study (exercise tolerance, blood pressure, direct venous pressure, fluoroscopy and roentgen and electrocardiographic examination) does not reveal any evidence of cardiac compression or cardiac hypertrophy due to adhesive pericarditis. The simplicity of the operation and the benefits elicited appear to warrant further employment of the procedure.

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King Operation for Bilateral Abductor Paralysis of Vocal Cords. L. Seed, Chicago.—p. 66.

Complete Cicatricial Stenosis of Esophagus: Permeation Made Possible by External Operation in Certain Cases. F. D. Woodward, Charlottesville, Va.—p. 94.

2-Amino-Heptane Sulfate as Nasal Vasoconstrictor. A. W. Proetz, St. Louis.—p. 112.

New Plastic Flap for Use in End-Aural Radical Mastoidectomy. G. E. Shambaugh Jr., Chicago.—p. 117.

Orbital Cellulitis. L. J. Wallner, Chicago.—p. 127.

Complications of Peritonsillar Abscess. L. M. Freedman and O. Hirsch, Boston.—p. 133.

Treatment of Otomycosis. M. J. Reeh, Randolph Field, Texas.—p. 146.

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Allergy in Relation to Otolaryngology. H. A. Kuhn and L. D. Linton, Hammond, Ind.—p. 162.

Histopathologic Changes of Temporal Bone in Paget's Disease. M. Tamari, Chicago.—p. 170.

Tuberculous Otitis Media: Complication of Thoracoplasty. J. G. Adams, Salem, Mass.—p. 209.

Nucleic Acid Treatment of Subacute and Chronic Sinusitis. A. C. Howe, Brooklyn.—p. 220.

Diagnosis and Treatment of Cancer of Larynx. E. S. Wright, Atlanta, Ga.—p. 228.

Archives of Dermatology and Syphilology, Chicago

45:641-842 (April) 1942

Threshold Erythema Dose of Roentgen Rays: II. Experimental Investigation of Various Aspects of Erythema Reaction and New Clinical Criterion for Standard Threshold Erythema Reaction. J. C. Belisario, Sydney, Australia.—p. 641.

Common Fungous Infections of Feet and Groins: Negligible Role of Exposure in Causing Attacks. M. B. Sulzberger, R. L. Baer, New York, and R. Hecht, Chicago.—p. 670.

Cutaneous Leishmaniasis (Oriental Sore) in United States and Canada: Survey of Literature and Report of Four Cases. K. G. Dwork, Forest Hills, N. Y.—p. 676.

Lupus Erythematosus: Clinical Observations in 443 Cases. E. Gahan, New York.—p. 685.

*Artificial Fever Therapy in Juvenile Neurosyphilis. J. C. Nielsen, J. R. Marx and H. A. Dickel, Ingleside, Neb.—p. 688.

Sensitivity to Protamine Zinc Insulin. W. Wolf, Lowell, Mass.—p. 694.

*Endogenous Allergy. E. Urbach, Philadelphia.—p. 697.

Xanthoma Diabeticorum with Unusual Form of Eruption: Report of Case. F. Wise and J. Garb, New York.—p. 723.

Adenoma of Sebaceous Glands (Adenoma Sebaceum), with Consideration of Keratotic Adenoma Sebaceum and True Adenoma of Sebaceous Glands. H. W. Woolhandler, Pittsburgh, and S. W. Becker, Chicago.—p. 734.

Secondary Infection of Cutaneous Lesions with Corynebacterium Diphtheriae. E. B. Tauber and L. Goldman, Cincinnati.—p. 757.

Artificial Fever for Juvenile Neurosyphilis.—Five patients of ages from 11 to 20 years were treated by Nielsen and his associates in the Kettering hypertherm. Four of them presented a picture of dementia paralytica and 1 a tabetic picture without the typical dementia paralytica colloidal gold curve of the spinal fluid. Four of the patients were given a complete course of artificial fever. This consisted of fifty hours of treatment in ten to eighteen sessions at a temperature of 105 to 106 F. One patient received an additional course of thirty hours about two and a half years after the first course. One patient died during the twelfth treatment. Necropsy showed the cause of death to be cerebral edema and subarachnoid hemorrhage. During fever therapy the patients received weekly intramuscular injections of bismuth subsalicylate and intravenous injections of mapharsen. The mapharsen was administered at the height of the fever. After the last fever treatment chemotherapy was continued for six weeks. After this, regular courses of arsenical and bismuth preparations were given up to the time of the report. The 4 surviving patients have been closely followed for one to three and a half years. At the time of writing the 3 patients with dementia paralytica are at home and all have shown definite improvement in both physical and mental activity. The condition of the tabetic after one year of improvement has remained stationary, except that the atrophy of his optic nerve has progressed to the point of blindness. The Wassermann reaction of 3 patients returned to normal immediately after therapy and of the tabetic patient after two years. The normal reaction of 1 of the patients became positive at a later date.

Endogenous Allergy.—Endogenous allergy embraces types of hypersensitiveness and hyposensitiveness which result from allergens formed within the body. Urbach divides the endogenous allergens into two groups: the autoendogenous allergens which arise from altered endogenous substances as a result of autolytic, degenerative or other changes in the tissues, and the heteroendogenous allergens which are derived from heterogenous protein from bacteria, fungi and parasites after multiplication or growth within the body. The category of autoendogenous allergy may include paroxysmal hemoglobinuria, autoagglutination, a syndrome resembling serum sickness from absorption of autogenous protein, a cutaneous autosensitization phenomenon, an autoanaphylactic ocular disease and menstrual allergy, pregnancy, hormone and physical allergy. The heteroendogenous allergies include certain acute exanthems, some acute arthritides and infestations. The recognition that autogenous substances, micro-organisms and parasites may act as endogenous allergens will induce the physician to search for them when an incriminating exogenous allergen cannot be found after thorough investigation. New diagnostic methods are necessary for identifying endogenous allergens. The test substances for such methods are uveal pigment, human milk, menstrual serum, urinary proteoses and undenatured bacterial antigens, and the determination of antihormones. The application of these principles will be of definite therapeutic value in dealing with allergies of endogenous origin.

Archives of Ophthalmology, Chicago

27:637-844 (April) 1942

Dysostosis Multiplex (Hurler's Disease, Lipochondrodysplasia, Gargoylism): Report of Ocular Findings in Five Cases, with Review of Literature. F. C. Cordes and M. J. Hogan, San Francisco.—p. 637.

Experiences with Iridencleisis. H. Eggers, New York.—p. 665.

Chemotherapy in Treatment of Gonorrheal Ophthalmia: Relative Effectiveness of Sulfanilamide, Sulfapyridine and Sulfathiazole. R. T. Wong, Honolulu, Hawaii.—p. 670.

Retinitis Pigmentosa with Widespread Gliosis—So-Called Choroideremia. F. H. Verhoeff, Boston.—p. 688.

Crystalline Dystrophy of Cornea. A. R. Sherman, Newark, N. J.—p. 692.

The Cornea: II. Transfer of Water and Sodium Chloride by Hydrostatic Pressure Through Excised Cornea. D. G. Cogan and V. E. Kinsey, Boston.—p. 696.

Local Use of Sulfanilamide and Derivatives in Practice of Ophthalmology. E. S. Connell and B. C. Trowbridge, Kansas City, Mo.—p. 705.

Devic's Disease (Ophthalmoneuromyelitis): Clinicopathologic Study. H. H. Noran and C. G. Polan, Minneapolis.—p. 707.

Survey of Records of Glaucoma in Ophthalmic Clinics. M. J. Schoenberg, New York.—p. 716.

Vollmer Tuberculin Patch Test: Its Possibilities in Ophthalmic Practice. B. Friedman and F. C. Keil Jr., New York.—p. 728.

Intranasal Drainage for Cure of Chronic Tear Sac Infection: New Technic Aided by Electrocoagulation so Simplified as to Be an Office Procedure. D. J. Morgenstern, Brooklyn.—p. 733.

Eye in Adrenal Sympathicoblastoma (Neuroblastoma): Importance of Ocular Findings, with First Pathologic Report of Metastatic Tumor in Choroid. L. Bothman, Chicago, and S. S. Blankstein, Milwaukee.—p. 746.

Mechanism of Production of Exophthalmos in Exophthalmic Goiter. J. N. Seitchik, Philadelphia.—p. 762.

Arkansas Medical Society Journal, Fort Smith

38:225-248 (April) 1942

Trochanteric Fractures of Femur. F. W. Carruthers, Little Rock.—p. 225.

What Can We Do for the Patient with Arthritis? L. E. King, Hot Springs National Park.——p. 228.

Bulletin of Johns Hopkins Hospital, Baltimore

70:201-334 (March) 1942

*Rat Bite Fever: Review of American Cases with Reevaluation of Etiology; Report of Cases. T. M. Brown and J. C. Nunemaker, Baltimore.—p. 201.

Rat Bite Fever.—Few diseases, Brown and Nunemaker believe, are in a more confused state with regard to etiology than rat bite fever. They review the subject and present evidence which suggests that Streptobacillus Moniliformis infection is induced with greater frequency by the bite of a rat than is Spirillum minus infection. There is good evidence that Spirillum minus causes an illness which may be indistinguishable from that produced by the streptobacillus. It has been suggested that some patients may have been infected with both agents. The relative etiologic significance of the two microorganisms in rat bite fever will be furthered by the proper search for both agents in future cases.

California and Western Medicine, San Francisco

56:111-166 (March) 1942

Common Bile Duct: Its Reconstruction by Transplantation of Biliary Fistula. W. Crane, Oakland.—p. 118.

Sulfonamide Therapy: Its Beginnings in the United States. C. Weiss, San Francisco.—p. 121.

Colon: Indications for Intubation Decompression in Its Surgical Conditions. L. C. Bennett, Los Angeles.—p. 123.

Ureteral Splint: Some Experiences with Its Use. L. Kindall, Oakland.—p. 127.

Macrocytic Anemia in Liver Disease. E. Wayburn, San Francisco.—p. 130.

Femoral Hernia: Modified Position for Its Repair. C. E. Rees, San Diego.—p. 134.

Poisoning in Childhood: Certain Significant Aspects of Its Etiology and Treatment. R. F. Chittenden, North Hollywood, and R. Mapes, Beverly Hills.—p. 137.

Vitamin Therapy in Dermatology. F. G. Novy Jr., Oakland.—p. 144.

Connecticut State Medical Journal, Hartford

6:239-316 (April) 1942

Is Tuberculosis Controlled? C. B. Gibson, Meriden.—p. 241.

Present Status of Bone Tuberculosis. P. P. Swett, Bloomfield.—p. 245.

Certain Details in Treatment of Pulmonary Tuberculosis. E. J. Lynch and K. S. Howlett Jr., Shelton.—p. 248.

Combating Tuberculosis with Education. C. C. Wilson, New York.—p. 253.

Tuberculosis in Schools. P. S. Phelps and Mary H. Harkin, Hartford.—p. 255.

Place of Tuberculosis Association in Civilian Preparedness for War and Peace. I. V. Hiscock, New Haven.—p. 258.

Evaluation of Problem of Care of the Mentally Defective in Connecticut. H. Yannet, Southbury.—p. 261.

Pulmonary Moniliasis. M. A. Hankin and S. Spinner, New Haven.—p. 264.

Development of Physiology in Connecticut. J. F. Fulton and H. E. Hoff, New Haven.—p. 266.

Journal of Aviation Medicine, St. Paul

13:1-104 (March) 1942

Transportation of Patients by Airplane. W. R. Lovelace 2d, Rochester, Minn., and J. Hargreaves, Washington, D. C.—p. 2.

Some Limitations of Electrocardiogram in Physical Examination for Flying. C. E. Kossmann, Randolph Field, Texas.—p. 26.

*Effect on Vital Capacity of Swift Ascent to Simulated Altitude of 35,000 Feet. M. Eckman and A. L. Barach, New York.—p. 36.

*Problems Inherent in Protection of Flying Personnel Against Temperature Extremes Encountered in Flight. E. A. Pinson and O. O. Benson Jr., Dayton, Ohio.—p. 43.

Corneal Transplantation: Its Value to Aviation Medicine. R. A. Perritt, Chicago.—p. 53.

Effect of Flight on Hearing. P. A. Campbell, Randolph Field, Texas.—p. 56.

Aviation Medical Standards: British Royal Air Force versus U. S. Army Air Corps. N. C. Mashburn, Maxwell Field, Ala., and F. A. Marshall, Dothan, Ala.—p. 62.

Effect on Vital Capacity of Swift Ascent.—The effect on the vital capacity of the lungs of 4 subjects of lowering the barometric pressure by 2,000 to 3,000 feet per minute was studied by Eckman and Barach in a simulated altitude of 18,000 and 35,000 feet, before ascending and on descending at 18,000 feet and at sea level. The average observations with an unheated spirometer show an apparent fall in vital capacity of from 4,570 cc. at sea level to 4,470 cc. and 3,875 cc. at pressures equivalent to an altitude of 18,000 and 35,000 feet, respectively. With a return to sea level a rise of from 3,875 cc. at 35,000 feet, 4,500 cc. at 18,000 feet and 4,755 cc. at sea level occurred. The data with the heated spirometer show that the average fall was from 5,035 cc. at sea level to 4,955 cc. at 18,000 feet and 4,665 cc. at 35,000 feet. The apparent decided fall in vital capacity at diminished barometric pressures was probably due to the precipitation of water vapor of the expired gases when they were cooled to room temperature. When correction for vapor tension and temperature was made, the fall was minimal. The minimal fall in vital capacity at barometric pressures equivalent to an altitude of 35,000 feet was probably due to an inadequate technic in measuring the changes in temperature in the gas collecting bells or to the expansion of gases in the intestine with the upward displacement of the diaphragm.

It is unlikely that the fall in barometric pressure at a high altitude decreases the pressure only on the outer surface of the pulmonary capillaries with consequent dilatation of these vessels and a resultant decrease in volume.

Protection of Flying Personnel Against Extreme Temperature.—It is pointed out by Pinson and Benson that the designing of adequate clothing which will protect the flier presents two unusual aspects: the extremely low temperatures encountered in flight and the rapidly changing environmental conditions as changes in altitude are effected. The average decrease in temperature with each thousand foot increase in altitude is about 3.5 degrees F. Heating the cabin and the use of insulated or heated clothing have been tried. When the advantages and disadvantages of these three methods of protecting the flying personnel against the cold of high altitudes are considered, electrically heated clothing appears to be most adaptable and it may be used in combination with varying amounts of insulative clothing. Its advantages are that the heat supplied can be adjusted to the changing requirements, and the bulkiness of the clothing can be reduced to a minimum, permitting normal activity and efficiency. Its disadvantages are that protection is inadequate in case the power supply fails or in forced landing and abandonment of ship on a cold terrain, that a rather large amount of energy is needed for each suit at extremely low temperatures and that the normal mechanism responsible for heat balance may be upset to such an extent that the individual probably cannot make proper adjustments with respect to the correct supply of heat needed. Under such conditions the internal body temperature may fall 2 or 3 degrees without causing any undue feeling of discomfort and without eliciting the shivering reflex. Eventually shivering will occur as the result of central excitation and when it does occur it may be so severe as to impede the flier's normal performance of his duty. The application of heat to all surfaces of the body together with proper distribution of the heat with respect to intensity will minimize the aforementioned objections. With proper distribution and application of heat, decreases in internal body temperature can be prevented. Suitable protection for the face in heated clothing presents the same difficulties (restriction of vision and breathing) as when insulative clothing is worn.

Journal of Infectious Diseases, Chicago

70:97-192 (March-April) 1942

*Studies on Brucellosis in Mexico: Comparative Study of Various Diagnostic Tests and Classification of Isolated Bacteria. M. Ruiz Castaneda, R. Tovar and R. Velez, Mexico, D. F., Mexico.—p. 97.

Antigenic Relationship Between Horse Antibodies and Proteins of Normal Horse Serum. G. G. Wright Jr., Chicago.—p. 103.

Study of Hemolytic Streptococci from Horse Treated with Sulfanilamide After Streptococcic Bacteremia Developed During Immunization. Jessie L. Hendry, Albany, N. Y.—p. 112.

Individual Response in Rabbits to Immunization with Complex Antigen. M. R. Irwin and A. Golden, Madison, Wis.—p. 119.

Nutritive Requirements of Salmonellas: III. Typhoid Bacillus; Carbon Source and Amino Acid Requirements. W. Burrows, Chicago.—p. 126.

Studies on Anaerobic Bacterial Flora of Suppurative Periodontitis. Elizabeth S. Hemmens and R. W. Harrison, Chicago.—p. 131.

Brucella Complement Fixation Reaction. B. Wise and H. W. Craig, Durham, N. C.—p. 147.

Studies on Transmission of Lymphocytic Choriomeningitis Virus by Arthropods. A. Milzer, Chicago.—p. 152.

Immunologic Specificity of Sulfonamide Azoproteins. A. G. Wedum, Cincinnati.—p. 173.

*Arthritis in Rats Caused by Pleuropneumonia-like Micro-Organisms and Relationship of Similar Organisms to Human Rheumatism. W. S. Preston, Ann Arbor, Mich.—p. 180.

Group of Coliform Bacilli Serologically Related to Genus Salmonella. C. A. Peluffo, P. R. Edwards and D. W. Bruner, Lexington, Ky.—p. 185.

Brucellosis in Mexico.—The increasing number of patients with brucellosis applying for diagnosis or treatment at the General Hospital of Mexico City gave Ruiz Castaneda and his associates an opportunity for isolating and classifying a relatively large number of brucella strains. Of 200 patients with brucellosis submitted to the usual procedures, 83.5 per cent were probably infected in Mexico City and the rest in endemic regions in parts of the Republic. Eighty-four per cent of blood cultures were positive, as compared with 93 per cent of positive agglutination tests and 80 and 60 per cent, respectively, for the allergic and opsonic tests. About 10 per cent of the 1940 cases gave negative serologic and allergic tests while Brucella was isolated from the blood. The classification of 150 strains of Brucella showed that 143 were Brucella melitensis, 5 Brucella abortus and 2 Brucella suis. The prevalence of Brucella melitensis in Mexico was corroborated by epidemiologic data pointing to the consumption of dairy products from goats as a main source of infection.

Arthritis in Rats.—The fact that arthritis is a frequent complication of other diseases in animals known to be caused by the organisms of bovine pleuropneumonia and the mastitis of sheep and goats prompted Preston to report the isolation of pleuropneumonia-like micro-organisms from spontaneous arthritis in rats, to produce experimental arthritis in them, to study its pathologic changes and to attempt to isolate similar organisms from patients suffering from rheumatoid arthritis. He studied the fluid aspirated from the joints of 19 patients with typical rheumatoid arthritis. From several patients more than 1 specimen of fluid was obtained for study. On no occasion was any organism related to the pleuropneumonia group obtained. The negative results agree with those of all other workers reporting similar studies.

Journal of Nervous and Mental Disease, New York

95:405-536 (April) 1942

Occurrence of Unilateral (Jacksonian) Grand Mal Seizures in Tetany: Report of Case, with Particular Reference to Differential Diagnosis and Clinical Detection of Syndrome. J. M. Meredith, University, Va.—p. 405.

Metrazol Shock Therapy in Presence of Generalized Osteoporosis: Case Report. V. L. Evans, Aurora, Ill.—p. 414.

Cortical Frequency Spectrums of Healthy Adults. F. A. Gibbs, Boston.—p. 417.

Attempted Suicide: Survey of 150 Patients Admitted to Two General Hospitals. A. B. Siewers and E. Davidoff, Syracuse, N. Y.—p. 427.

Blood Bromides: Study of Blood Serum Bromide Level in 145 Consecutive Admissions to Bliss Institute. S. Liebman and Ellen Richman, St. Louis.—p. 442.

Some Remarks on Tumors of Brain in Childhood. O. Marburg, New York.—p. 446.

Metrazol Therapy in Affective Psychoses: Study of Controlled Series of Cases. E. Ziskind, Esther Somerfeld Ziskind and L. Ziskind, Los Angeles.—p. 460.

Gestalt Dynamics and Psychopathology. G. W. Kisker and G. W. Knox, Columbus, Ohio.—p. 474.

Journal of Thoracic Surgery, St. Louis

11:357-468 (April) 1942

Significance of Metastasis in Primary Carcinoma of Lungs: Report of Two Cases with Unusual Site of Metastasis. A. Ochsner and M. DeBakey, New Orleans.—p. 357.

Topographic Classification of Cancer of Lung, with Special Reference to Surgical Implications of Circumscribed Variety. H. Neuhof, C. B. Rabin and I. A. Sarot, New York.—p. 388.

*Pneumonectomy for Carcinoma of Lung. S. W. Harrington, Rochester, Minn.—p. 396.

Experiences with Total Pneumonectomy. N. S. Shenstone, Toronto, Canada.—p. 405.

*Unexpandable Lungs: Report of Twenty-Seven Cases. J. E. Farber, Buffalo.—p. 424.

Experimental Observations on Certain Intracranial Complications of Particular Interest to the Thoracic Surgeon. E. M. Kent and B. Blades, St. Louis.—p. 434.

Huge Chondrosarcoma Arising from Chest Wall and Extending into Thorax and Abdomen: Report of Case. F. R. Harper, Denver.—p. 446.

Prevention of Tissue Emphysema Following Closed Pneumonolysis. H. H. Cherry, Paterson, N. J.—p. 451.

Pulmonary Abscess: Value of Early One Stage Operation. R. R. Shaw, Dallas, Texas.—p. 453.

Laryngoscopic and Bronchoscopic Ultraviolet Lights for Treatment of Tuberculosis of Respiratory Tract. P. D. Crimm, Evansville, Ind.—p. 467.

Pneumonectomy for Carcinoma of Lung.—Because of the relatively short time (the first successful pneumonectomy for pulmonary carcinoma was reported by Graham in 1933) during which carcinoma of the lung has been treated surgically, it is impossible to predict the ultimate place that surgical intervention will have in its treatment. The technical problems have been solved to a point which makes the operative mortality relatively small. With the advancement in operative procedures and improvement in diagnostic methods that are constantly taking place, Harrington believes that the results of surgical treatment will improve and that surgery will become the generally accepted treatment. Future improvement in results depends mostly on early diagnosis and immediate surgical intervention.

Unexpandable Lungs.—About 5 per cent of therapeutic pneumothoraces terminate in unexpandable lungs. Among 318 patients receiving therapeutic pneumothorax during two years Farber encountered 27 with unexpandable lungs; in 5 of them a bronchopleural fistula was demonstrated. In the other 22 various etiologic factors were the cause for unexpansion: bronchial stenosis in 3, massive parenchymal fibrosis in 16, visceral pleural thickening due to long standing pyopneumothorax, oleopneumothorax or hydropneumothorax in 20, pleural adhesions in 3 and imperative collapse in 5. The dangers connected with the dead pleural space are empyema, tuberculosis, mixed infection and bronchopleural fistula. In this connection Churchill has warned against the danger of temporary collapse for a pulmonary process that requires permanent collapse, such as thoracoplasty. The early replacement of unsuccessful pneumothorax by permanent collapse might reduce the incidence of unexpandable lungs.

Journal of Urology, Baltimore

47:203-402 (March) 1942. **Partial Index**

Sodium Sulfathiazole: Clinical Study. G. Carroll, L. Kappel and B. Lewis, St. Louis.—p. 209.
Sulfathiazole Therapy in Urinary Tract Infections. E. P. Alyea, Durham, N. C.—p. 219.
Simultaneous Bilateral Operation for Renal and Ureteral Calculi. J. T. Priestley and T. L. Schulte, Rochester, Minn.—p. 255.
Sulfonamide Renal Calculus Surgically Removed Two Years After Administration of Sulfapyridine. H. R. Newman and I. H. Shleser, Boston.—p. 258.
*Sulfathiazole Crystallization in Kidney. H. J. Lindner and D. W. Atcheson, New Orleans.—p. 262.
Solution of Incrustations and Calculi in Alkaline Cystitis. S. F. Wilhelm and B. Levine, New York.—p. 270.
Sulfadiazine Calculi in Urinary Tract: Report of Case. P. B. Hughes, J. J. Sayen and L. W. La Towsky, Philadelphia.—p. 274.
Modification of Munro Apparatus for Tidal Drainage of Urinary Bladder. F. H. Hesser, Durham, N. C.—p. 283.
*Calcification of Vasa Deferentia. O. S. Lowsley and P. J. Riaboff, New York.—p. 293.
Influence of Temperature on Sulfathiazole Therapy of Gonococcic Infections. F. B. Bang, Baltimore.—p. 299.
Carcinoma of Prostate: Young's Radical Perineal Prostatectomy. L. G. Lewis, Baltimore.—p. 302.
Prostatic Carcinoma. B. S. Barringer, New York.—p. 306.
*Relationship Between Skeletal and Genitourinary Tuberculosis. J. C. McClelland and K. F. Davis, Toronto, Canada.—p. 320.
*Supernumerary Kidney with Vaginal Ureteral Orifice. J. H. Shane, Dallas, Texas.—p. 344.
Perineal Prostatectomy and Transurethral Resection: Comparison of Results. C. A. Owens, Omaha.—p. 366.
Disturbances of Acid Base Balance of Blood: Their Significance and Influence on Prognosis in Elderly Surgical Patients. H. S. Rupert, Greeley, Colo.—p. 379.
Use of Desiccated Plasma in Urology. J. M. Hill and E. E. Muirhead, Dallas, Texas.—p. 387.

Sulfathiazole Crystallization in Kidney.—Lindner and Atcheson report two fatal cases of complete anuria following sulfathiazole. The results of cystoscopy and necropsy are presented. When sulfathiazole is used the urine should be checked daily as to volume of fluid intake and output, hematuria, crystals, albuminuria and casts. The blood sulfathiazole level does not indicate the degree of crystallization. Sulfathiazole concretions are not radiopaque. The crystals may mechanically block the ureters but it is more likely that serious block occurs in the tubules. The best therapy is renal lavage with warm water through ureteral catheters supplemented by fluids, alkali and heat.

Calcification of Vasa Deferentia.—Lowsley and Riaboff cite the thirty-second case of calcification of the vasa deferentia, ampullas of the vasa deferentia and the seminal vesicles. The reported cases have been divided into inflammatory and noninflammatory groups, in both of which the calcified tissue on microscopic examination appears as a hard mass, sometimes of bonelike consistency. The condition may occur at any age, from youth to senility; the youngest patient was 14 and the oldest 81. Of the 32 cases 21 were found at necropsy, 1 at operation and 10, including the authors' case, were diagnosed in the living subject. The diagnosis is based on roentgen observations confirmed by vasography. Calcification of the vas should be differentiated from stones in the ureters and in the bladder. On rectal examination it should not be confused with a neoplastic growth. No symptoms are specific, but when a small stone is present in the lumen of the vas deferens it may manifest itself by an attack of spermatic colic-like pain and blood in the urine.

Skeletal and Genitourinary Tuberculosis.—In a study by McLelland and Davis, a urine culture of 297 patients with skeletal tuberculosis revealed 66 with urinary tuberculosis. Urinary symptoms were absent in 42, mild in 18 and severe in only 6. In this way tuberculosis of the urinary tract was discovered some time before symptoms appeared. Of the 66 patients 27 are dead after an average of five years of observation. This death rate is practically twice that of complicated and uncomplicated skeletal tuberculosis. The authors conclude that a patient with a single skeletal tuberculous focus has an 18 per cent chance of having genitourinary tuberculosis, while the chance in 1 with multiple lesions is 32 per cent.

Supernumerary Kidney.—Shane reports a case of supernumerary kidney which before operation was thought to be a duplication of the pelvis and ureter. Of the 40 cases reported in the literature the ureter was fused with the normal kidney in 15, was not fused in 13, ended as a blind sac in 1, was lacking in 2 and was present but not traced or described in 10. Four of the 13 supernumerary kidneys with separate ureters were ectopic. In the author's case the ureter opened into the vagina just beneath the urethra. It emphasizes that any child with enuresis should not be relegated to the group of "bed wetters" until a complete urologic study is made. The author's patient complained of lack of bladder control, pyelitis and pregnancy. A general physical examination, a plain urinary roentgenogram and an excretory urogram revealed nothing unusual. Cystoscopic examination showed a normal bladder and two ureteral meatuses on the right side and only one on the left. The catheters were withdrawn after a pyelographic film was made and the cystoscope was reintroduced, when some urine spurted just beneath the urethra. Compression of the urethra against the cystoscope caused another spurt, allowing a small slit in a vaginal fold to be seen. A ureteral catheter was introduced into this orifice and with the cystoscope in the bladder a catheter was passed into the one ureteral meatus on the left side. The two catheters were injected with an opaque medium, and the pyelograms of the right side were interpreted as a reduplication of the pelvis and ureter. On the left side the upper pelvis was dilated and drained by a dilated ectopic ureter into the vagina. Specimens of urine taken from all four segments were clear except the one from the ectopic ureter, which contained pus. The patient was allowed to go through the pregnancy. Operation fourteen months after delivery revealed two separate kidneys on the left side, one much smaller above the normal appearing kidney. The supernumerary kidney with ectopic ureter drained into the vagina. The supernumerary kidney, its pelvis and a portion of its ureter were removed. Microscopic study of the removed tissue showed considerable fibrosis and round cell infiltration. Since operation the patient has been free from any urinary soiling or infection. The upper pelvis on the right side may also drain a supernumerary kidney. This segment may later become infected and require a surgical procedure.

Minnesota Medicine, St. Paul

25:161-240 (March) 1942

Undulant Fever. D. G. Mahle, Plainview.—p. 177.
Marked Retrusion of Mandible. G. B. New and J. B. Erich, Rochester.—p. 181.
Ocular Manifestations of Head Traumas. T. J. Edwards, St. Paul.—p. 184.
Accumulated Experience of Department of Pathology, University of Minnesota, on Neuropsychiatric Material: I. General Review. A. B. Baker and H. H. Noran, Minneapolis.—p. 187.
Intrapleural Pneumonolysis: Experiences with This Procedure at Nopeming Sanatorium. G. A. Hedberg, Nopeming.—p. 191.
Differential Diagnosis of Idiopathic Low Back Pain. R. K. Ghormley, Rochester.—p. 196.
*Quinidine in Auricular Fibrillation. R. Berman and J. S. Blumenthal, Minneapolis.—p. 198.

Auricular Fibrillation.—Of 97 patients with auricular fibrillation seen during 1939, Berman and Blumenthal treated 48 with quinidine in doses up to 48 grains (3 Gm.) a day. The disorder of 15 was regulated and that of 33 did not respond

to treatment. There were 6 deaths. The disorder in none of the 49 control patients became regular; there were 2 deaths. After the heart rate was retarded with digitalis, quinidine was administered according to the method of Weisman; the total daily dose was divided into three or four equal parts and administered at hourly intervals during the morning. The daily dose was increased by 3 to 5 grains (0.2 to 0.32 Gm.) as long as fibrillation persisted and until toxic symptoms developed. The highest dose given was 48 grains. Toxic symptoms of nausea, vomiting, diarrhea, collapse and death occurred following doses as low as 3 grains. Eight of the 15 patients whose condition was regulated remained so for two to twenty-four months after regulation (average fourteen months) and 7 relapsed in one to fourteen months after an average regularity of six months. Quinidine should not be used when the fibrillation has been established for years, when the patient is old and feeble, when the heart is extremely large, when coronary disease is pronounced, when compensation cannot be established or when the heart cannot be slowed with digitalis.

New England Journal of Medicine, Boston

226:411-468 (March 12) 1942

*Curare Treatment of Spastic Children: Preliminary Report. E. Denhoff and C. Bradley, East Providence, R. I.—p. 411.

Paradoxic Hematemesis: Report of Case. F. Hinman Jr., Baltimore. —p. 417.

Endoscopy. E. B. Benedict, Boston.—p. 449.

Spastic Children.—Denhoff and Bradley administered curare in various doses by several routes to 6 children with cerebral palsy. Throughout the period of treatment the children's daily activities were not curtailed. Two children each were given curare by the subcutaneous, intravenous or intramuscular route. The intramuscular route proved the most satisfactory, and subsequent determinations were made on the basis of this route. The optimal dose for each child was determined by gradually increasing the initial dose of 5 mg. by 5 mg. until mild paralytic symptoms of overdosage appeared. A maintenance dose was then established slightly (4 to 8 mg.) below this level. To eliminate any possibility that beneficial effects of curare injection could have resulted through suggestion, the response of each child to intramuscular injection of sterile saline solution was observed and also after each child had been on a maintenance dose for some time the results during several days to several weeks without medication were noted. The effect of curare combined with 10 to 20 mg. of amphetamine sulfate daily was studied. Progress under physical therapy was definitely accelerated by curare in the 6 children. When amphetamine sulfate was added, the accomplishments of 4 of the children were even further increased because of the additional "drive" that the drug imparted. Without curare the amphetamine presumably stimulates the same drive, but because of rigid, unmanageable limbs the child is frustrated in his attempt to accomplish some muscular act and as a result becomes irritable or sulky. By systematic individual adjustment 0.9 to 3.3 mg. of curare per kilogram of body weight resulted in muscular relaxation lasting approximately four days. Toxic or dangerous side effects were not encountered, and continued use did not appear to establish tolerance.

North Carolina Medical Journal, Winston-Salem

3:109-160 (March) 1942

Further Improved Technic for Cure of Inguinal Hernia. T. C. Bost, Charlotte.—p. 109.

Management of Some of Problems of Later Life. R. D. McMillan, Red Springs.—p. 113.

Some of Problems of Antenatal Care in North Carolina. A. W. Makepeace, Chapel Hill.—p. 117.

Acute Perforation of Peptic Ulcer: Study of Thirty-Nine Consecutive Cases. N. P. Battle, Rocky Mount.—p. 120.

Lymphocytic Meningitis. A. A. Barron, Charlotte.—p. 125.

Thrombophlebitis: Treatment by Novocain Injection of Sympathetic Nerves. W. H. Sprunt Jr., Winston-Salem.—p. 127.

Treatment of Facial Paralysis. B. E. Ellis, Indianapolis.—p. 130.

Importance of Recognizing Fundus Pathology. C. R. Mills, Greensboro. —p. 132.

Instruction versus Service in Health Program. P. Y. Greene, Graham. —p. 134.

Ureteral Ectopia. W. E. Daniel, Charlotte.—p. 137.

Accessory Abdominal Testicle. O. W. Cranz, Kinston.—p. 140.

Psychiatric Quarterly, Utica, N. Y.

16:219-436 (April) 1942. **Partial Index**

Anxiety in a Neurosis of Seventy Years Standing. C. P. Oberndorf and A. Eisendorfer, New York.—p. 221.

Mental Defectiveness with Unusual Syndrome of Congenital Physical Anomalies. S. Androp, Catonsville, Md.—p. 264.

Hirsutism. J. H. Schwartz, Queens Village, N. Y.—p. 281.

Ten Year Comparatitve Study of Treatment of General Paresis with Fever Therapy (Radiant Energy) and Chemotherapy. K. K. Slaght and N. Jones, Rochester, N. Y.—p. 306.

Massive Dose Testosterone Therapy in Male Involutional Psychosis. M. Zeifert, Brooklyn.—p. 319.

The Problem of Psychogenic Precipitation in Schizophrenia. O. Kant, Worcester, Mass.—p. 341.

Asphyxial Episodes and Their Prevention in Electric and Other Convulsive Therapies. H. Brill and L. Kalinowsky, West Brentwood, N. Y.—p. 351.

Without Psychosis—Chronic Alcoholism: Follow Up Study. C. A. Whitaker, Louisville, Ky.—p. 373.

Experience with Intravenous Use of Solution of Crystalline Zinc Insulin in Hypoglycemic Treatment of Schizophrenia. L. Reznikoff and J. J. Scott, Secaucus, N. J.—p. 399.

Southern Surgeon, Atlanta, Ga.

11:227-304 (April) 1942

War and Medical Service. P. V. McNutt, Washington, D. C.—p. 227.

Collateral Cerebral Circulation by Muscle Graft: Technic of Operation with Report of Three Cases. F. E. Kredel, Charleston, S. C.—p. 235.

How Can the Medical Profession Augment National Efficiency During War Time? L. G. Rowntree, Washington, D. C.—p. 245.

Polycystic Kidney Disease—Its Surgical Management. J. U. Reaves, Mobile, Ala.—p. 254.

Relationship of U. S. Public Health Service to National Defense. J. A. Crabtree, Washington, D. C.—p. 266.

*Chemotherapy an Adjunct to Surgery, with Report of Use of Sulfathiazole Intraperitoneally. A. S. Jackson, Madison, Wis.—p. 274.

*Important Factors in Surgical Management of Patients with Severe Hyperthyroidism. G. Crile Jr., Cleveland.—p. 282.

Chemotherapy and Surgery.—Jackson questioned twelve leading surgeons on the value of the intraperitoneal use of sulfanilamide and sulfathiazole: eight feel that the drugs definitely lower the mortality and ten that they decrease complications. A review of 161 major operations performed in clean surgical cases in which a sulfonamide derivative in the form of powder was sprinkled in the incision reveals that no infections occurred. Still more remarkable results were obtained with the use of sulfathiazole intraperitoneally in 13 cases of perforated appendix, 3 of pelvic abscesses, 3 abscesses from perforation of a malignant growth of the colon or sigmoid, 2 of perforated ulcer, 2 of perforation of the gallbladder with localized abscess and 1 of acute perforation of the gallbladder with free bile throughout the peritoneal cavity. In the latter series there were no deaths or serious complications, such as pulmonary sequelae, prolonged wound drainage, cystitis, postoperative ileus or obstruction. Sulfathiazole did not prevent postoperative thrombophlebitis, as 2 instances occurred. Chemotherapy will never replace good surgery but as an adjunct to it it is without an equal.

Severe Hyperthyroidism.—Crile believes that a unilateral injury of a recurrent laryngeal nerve constitutes a definite hazard, for the incidence of recurrent laryngeal nerve paralysis seems to be an important factor in influencing the postoperative mortality rate of thyroid surgery. Rarely is the paralysis directly responsible for a postoperative death, but it may affect the patient's convalescence in devious ways and thus increase the mortality rate of thyroid surgery. Injury of a recurrent laryngeal nerve may be the initial accident leading to serious postoperative complications. Since the author has adopted a technic in which the inferior thyroid arteries are ligated outside the capsule of the thyroid, the incidence of persistent accidental paralysis of the vocal cord has fallen to 0.29 per cent in the last 375 cases. There have been no deaths since the advent of the sulfonamide drugs, the threat of pneumonia has practically disappeared and the operation need no longer be performed in stages. The importance of diet, sedation, oxygen and antipyretics in the postoperative care of these patients can never be overemphasized.

Wisconsin Medical Journal, Madison

41:285-368 (April) 1942

Cardiac Emergencies and Their Management. J. A. Evans, Boston.—p. 297.

Report on Cesarean Sections and Hospital Deliveries Occurring in Wisconsin—1934 to 1940 Inclusive. W. C. Keettel, Madison.—p. 302.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Lancet, London

1:219-248 (Feb. 21) 1942

*Meningococcic Encephalitis. H. S. Banks and J. E. McCartney.—p. 219.
Intestinal Flatulence Without Excessive Fermentation. A. Hurst.—p. 223.
*Histoplasmosis of Darling: Report of Case. D. C. L. Derry, W. I. Card, R. Wilson and J. T. Duncan.—p. 224.
*Pulmonary Fat Embolism: Clinical and Radiologic Observations. J. C. Scott, F. H. Kemp and A. H. T. Robb-Smith.—p. 228.

Meningococcic Encephalitis.—Banks and McCartney discuss their observations on encephalitis and cite cases illustrating the main clinicopathologic types. During the epidemic of 1940-1941 a number of cases of fulminating and acute meningococcic infection were observed. Experience suggests that the meningococcus invades meningeal or cerebral vessels and thence reaches the subarachnoid space. In the ordinary form, beyond an occasional capillary thrombosis there is little or no recognizable cerebral lesion. When the organism is highly virulent and the dose massive, cases are found near the peak of an epidemic in which cerebrospinal invasion is of much greater intensity and range. Three distinct clinicopathologic degrees of this invasion can be recognized: The first, the most intense and probably the most rare is a fulminating encephalitis, without or with meningitis. This form is characterized by a profuse purpuric rash with rapid onset of coma and by death within twenty-four hours. Intense congestion and edema, small hemorrhages and widespread capillary thrombosis in the central nervous axis, with little evidence of polymorphonuclear infiltration, are seen. The process is consistent with a toxic effect produced by a massive dose of a highly virulent organism. In the most rapidly fatal cases, meningitis does not have time to develop. In others meningitis commences and occasionally the adrenals, accompanied by massive hemorrhage, may be invaded. Mixtures of these two fulminating forms may occur. The second type, slightly less intense than the fulminating, is an acute encephalomeningitis. It is characterized by signs of acute meningitis which rapidly become complicated by encephalitic signs. These patients usually die within a few days without regaining consciousness; recovery with transient parkinsonian symptoms may also result. Pathologically congestion and edema with capillary thrombosis and hemorrhages scattered regionally are seen. Another lesion is an inflammatory reaction, shown by perivascular polymorphonuclear cuffing and hemorrhage. Under sulfonamide treatment both the meningitis and the cerebral inflammatory reaction usually clear up, but the toxic damage is relatively unaffected and it is probably the principal cause of death. In the third main syndrome, a meningitis with focal encephalomyelitis, the cerebral invasion is less and may be seen at the most virulent phase of an epidemic and also at other stages. The clinical picture is diverse and includes protracted and recurrent delirium with sudden fatal collapse, or sudden convulsions with secondary coma and death, or even deep coma from large subdural hemorrhage. The pathologic lesion is a purulent meningitis with a limited number of small hemorrhages and sometimes thrombosis and slight perivascular infiltration, usually about the basal ganglions, midbrain, medulla or upper cord.

Histoplasmosis of Darling.—Derry and his colleagues believe that they are reporting the first case of histoplasmosis of Darling to occur outside the American continent. Nothing in their patient's history suggested a probable source of the infection. The patient, a soldier of 30, was admitted to an emergency medical service hospital on April 8, 1940 from a base hospital in France, with the complaint of cough and sore throat for three months and a painless swelling in the preauricular region a month before which had disappeared in five days. On the supposition that the case might be kala azar, antimony intravenously was started but stopped owing to the discovery of the fungus, and large doses of potassium iodide were given. However, the patient died four and a half months after admission. Diagnosis cannot be made on clinical grounds alone; microscopic and cultural methods must be employed. The increase in the number of cases recently reported from America suggests to the authors that this infection has been overlooked in the past in America and in this country. Cultures of the strain of the yeast form Histoplasma capsulatum from their patient were found to be still viable up to nine months on dextrose-agar. These periods are longer than those recorded for survival of some of the American strains on other mediums.

Pulmonary Fat Embolism.—The records and roentgen studies of 4 patients who have survived fat embolism are discussed by Scott and his co-workers. Clinically the first case was one of pulmonary and systemic fat embolism with characteristic signs: After an interval of six days there was sudden respiratory distress associated with purpuric hemorrhages over the neck and upper parts of the trunk. The physical signs were those of acute pulmonary edema and the roentgen changes were typical of the condition. There was no laboratory information to confirm the presence of fat. The second patient showed slight cyanosis and a raised respiratory rate after signs of shock had passed, and these signs were thought to be due to pulmonary fat embolism because the chest was not injured and the roentgenogram showed no abnormality. Fat was found in the sputum and the urine the next day, and in diminishing quantities at subsequent examination. The sputum was not examined microscopically. The third instance was pulmonary fat embolism in a patient with chronic bronchitis who recovered from a subsequent pneumonia. These 3 patients had sustained fractures. The wall of the chest of the last patient was injured by direct violence. Clinically and roentgenographically extensive consolidation of the left lung attributed to pulmonary concussion was elicited. Subsequently it was shown that there was pulmonary fat embolism. Bronchitis and later a pneumonia developed from which the patient has recovered, but bronchitis persists. Considerable quantities of fat may be retained in the lungs, sufficient to cause definite respiratory embarrassment, without producing roentgen changes.

Medical Journal of Australia, Sydney

1:157-184 (Feb. 7) 1942

Use of Cystourethrogram in Diagnosis of Various Conditions in Lower Portion of Urinary Tract. H. Mortensen.—p. 157.
Studies in Tuberculosis. R. Webster.—p. 160.
Treatment of Essential Hypertension. B. T. Shallard.—p. 166.

Tuberculosis.—Webster states that biopsy study of lymph nodes in the diagnosis of tuberculosis of joints is the procedure that holds promise and merits careful examination and judicious application, as too often clinical and roentgen signs are insufficient to establish a diagnosis in the early and imperative stage. From the observations of Valls and of Seddon and the author's results, it appears that tuberculous inguinal lymphadenitis is a frequent concomitant of tuberculosis of the knee joint and that biopsy of the lymph nodes in relation to other suspected joints might profitably be instituted. Several of the inguinal nodes which enabled the author to obtain confirmatory laboratory evidence of tuberculosis of the knee joint were so small that the initial hemisection of the unformalized specimen was difficult. The only patients in whom inguinal adenitis was clinically evident were 2 children considered to be suffering from tuberculosis of the hip joint. This feature supports the attribution of tuberculosis of the inguinal nodes in these 2 children to cutaneous tuberculous foci rather than to tuberculosis of the hip joint. Tuberculous lymphadenitis was demonstrated in the inguinal lymphatic nodes of 6 of 7 patients, all but 1 of whom were suffering from tuberculosis of the knee joint, in an inguinal node of 1 adult exhibiting advanced tuberculosis of the ankle joint and in an axillary node of a child affected with tuberculosis of the wrist joint. Uniformly negative results with respect to tuberculosis were obtained from the study of the lymphatic nodes excised from 15 patients with arthritis. If the tubercle bacilli reach the inguinal lymphatic nodes and initiate reactive changes, other micro-organisms, particularly the pyogenic cocci, may be expected to do likewise.

Anales del Instit. Mod. de Clín. Méd., Buenos Aires

21:1-700 (No. 1) 1940. **Partial Index**

*Acute Syphilitic Ataxia. H. Williams, D. A. Passanante and D. Mamone.—p. 131.

Acute Syphilitic Ataxia.—Williams and his collaborators direct attention to an atypical form of acute ataxia in cases of neurosyphilis the clinical symptoms of which correspond to the type of acute tabetic ataxia described by Guiliain. The type described by the authors is tabetiform rather than tabetic. It is controlled by antisyphilitic therapy. The Argyll Robertson sign disappears and the achilles and patellar reflexes reappear, whereas in acute tabetic ataxia the Argyll Robertson sign is present and the patellar and achilles reflexes are absent. The author believes that the tabetiform type of acute syphilitic ataxia is caused by posterior meningomyeloradiculitis in cases of neurosyphilis.

Archivos Argentinos de Pediatría, Buenos Aires

17:1-112 (Jan.) 1942. **Partial Index**

*Treatment of Bacillary Dysentery with Sulfathiazole. J. M. Valdés and J. B. Sosa Gallardo.—p. 3.
Essential Subacute Myocarditis: Case. J. P. Garrahan, R. Kreutzer and C. Ruiz.—p. 14.
Consideration of Hemorrhagiparous Syndromes in the Newborn. María Luisa Aguirre and F. González Alvarez.—p. 26.
Pericarditis in Still's Disease. J. R. Diaz Nielsen and E. A. Kirchmayr.—p. 45.
Thrombosis of Splenic Vein. D. Fuks.—p. 61.

Treatment of Bacillary Dysentery with Sulfathiazole.—Valdés and Sosa Gallardo quote figures which indicate that a large percentage of acute diarrheas in infants are caused by dysenteric infections. In view of the fact that therapeutic measures such as diet, serum, bacteriophage and symptomatic drugs produced only mediocre results, the authors decided to use sulfathiazole. The drug was administered by mouth in doses recommended for coccic infections, namely 0.2 Gm. per kilogram of body weight daily. This amount was given divided at four hour intervals. After forty-eight hours the dose can be diminished, but the medication is to be continued for from four to eight days. The authors treated 35 cases (17 of Shiga dysentery, 16 of Flexner and 2 of Sonne) which had been bacteriologically verified. There was no mortality; tenesmus, colic and other disturbances disappeared within six to eight hours after the ingestion of the drug; the number of evacuations decreased and became normal before seventy-two hours had elapsed; toxic symptoms improved. The authors gained the impression that the cases of diarrhea which proved refractory to sulfathiazole must be considered of nondysenteric origin.

Monatsschrift für Unfallheilkunde, Berlin

47:417-500 (Dec.) 1940

*Remarkable Late Results in Central Nervous System of Acute Carbon Monoxide Poisoning in Very Hot Atmosphere. K. Humperdinck.—p. 417.
Question of Possibility of Walking with Fresh Femoral Fracture: Insurance Aspects. A. Slany.—p. 430.

Late Central Nervous Sequels Following Monoxide Poisoning in Hot Atmosphere.—Humperdinck reports the history of a locksmith aged 40 who worked on a ventilator inside a large economizer. The temperature was so high that the work had to be interrupted every five or six minutes. It required in all two and one-half hours, but the worker felt faint and had to interrupt the work for one hour. There was no loss of consciousness, vomiting or severe vertigo. In the evening of the same day a change was noted in the man: he was in a state of agitation and talked as if intoxicated. He continued to work for eight more days, but there was a decided change in his behavior. The formerly quiet worker talked and sang constantly and complained of fatigue and headache. Gradually a severe psychosis developed. Examination disclosed no signs of cerebral tumor or syphilis but rather symptoms of a severe organic disease of the brain, which in many respects resembled that of dementia paralytica. Death occurred six years later. Necropsy disclosed extensive foci of malacia in the medullary substance of both hemispheres. Since all other causes of malacia could be excluded, it was ascribed to anoxemia and, because of the history, to acute carbon monoxide poisoning. Compensation had at first been denied, because typical signs of acute carbon monoxide poisoning were not present. The influence of the almost unbearable heat cannot be ignored.

Virchows Archiv f. path. Anat. u. Physiol., Berlin

307:1-280 (Dec. 30) 1940. **Partial Index**

So-Called Basophilic Degeneration of Heart Muscle. K. Umeda.—p. 1.
Primary Tumors of Heart: Pathologic Aspects. W. Schink.—p. 18.
Calcium and Iron Incrustations of Lungs in Callous Gastric Ulcer with Pyloric Stenosis: Extrarenal Calcifications in Hypochloremia. W. Volland.—p. 85.
*Extramedullary Myelopoiesis in Embryonal Adenosarcomas (Wilms Tumors). M. Svendsen.—p. 99.
*Flat, Cavernous Hemangioma of Dura ("Pachymeningitis Hemorrhagica Interna"). H. Hompesch.—p. 111.
Investigations on Vitamin A Metabolism of Eye. E. Schairer and K. Patzelt.—p. 124.
Influence of Extracts of Anterior Pituitary and of Colchicine on Island of Langerhans: Problem of "Pancreatropic Hormone." H. Güthert.—p. 175.
*Fatty Infiltration of Liver. H. W. Sachs.—p. 253.

Extramedullary Myelopoiesis in Embryonal Adenosarcomas.—Svendsen reports typical adenosarcoma in 2 children aged 3 years and in a woman aged 21. He emphasizes the pronounced vascularization of the tumors and suggests that some of the cavities lined with low to flat epithelium-like cells are embryonal traces of vessels. Around these cavities erythropoiesis could be observed. Granulopoiesis could be seen near the epithelium-like nodules. Reports in the literature regarding blood-forming tissues in the renal pelvis are associated with these observations. The author suggests that adenosarcomas originate in mesenchymal cells of the renal excretory system. The spaces lined with high columnar epithelium-like cells are regarded as formations belonging to the pronephros. The mesenchymal cells give rise to various connective tissue formations, structures belonging to embryonal hematic islands and hemopoietic tissue.

Flat, Cavernous Dural Hematoma: "Hemorrhagic Internal Pachymeningitis."—According to Hompesch there is as yet no agreement about the genesis of so-called hemorrhagic internal pachymeningitis. Clinicians still believe that it can originate from a primary hemorrhage. Jores and Laurent, as well as van Vleuten and Boeckmann, demonstrated that this view is untenable. The author reviews 7 cases which throw light on the genesis of hemorrhagic internal pachymeningitis. The vascular form of hemorrhagic internal pachymeningitis does not have an inflammatory or reactive pathogenesis. On the contrary, it could be demonstrated that this disorder is a flat cavernous hemangioma. It is a tumor-like defect. Hemorrhages are always secondary manifestations. The original aspects may be changed by such hemorrhages. The author suggests replacing the term hemorrhagic internal pachymeningitis by flat cavernous hemangioma of the dura, which corresponds to the nature of this disease.

Fatty Infiltration of Liver.—Sachs demonstrates that five topographic types can be differentiated in fatty infiltration of the hepatic lobules and cells: (1) scattered drops in the lobules, (2) central peribiliary infiltration, (3) central perivascular infiltration, (4) peripheral perivascular infiltration and (5) focal perivascular infiltration. The diffuse fatty infiltration is regarded as a particularly extensive form of the central perivascular or the peripheral perivascular fatty infiltration. In order to draw etiologic conclusions from the topographic types of fatty infiltration, the cases with pure topographic type of infiltration were selected first from the entire material and classified according to their diagnosis at necropsy. It was possible to classify most of the complicated cases. The tabulation permitted inferences about the etiology and it was possible to classify type 1 as the physiologic, type 3 as the hypoxemic and type 4 as toxic fatty infiltration. For the type listed under 2 a connection with brown hepatic pigment was suspected, and it was attempted to explain type 5 as similar to hypoxemic or toxic fatty infiltration. It is assumed that the nutritional status is of importance but that it only intensifies the fatty infiltration, which is brought on by other factors. Fatty degeneration is not a primary metabolic disturbance but is only the indicator of a parenchymal lesion, which would be hidden if, because of retarded utilization of fat, residues were not formed in the damaged hepatic cells. A storage function of the liver for fat is denied, and steatosis is regarded as the severest form of toxic fatty infiltration. The author suggests a hypothesis for the hepatic utilization of fat and its disturbances and also an etiologic and morphologic classification of fatty infiltration.

Book Notices

The Principles of Neurological Surgery. By Loyal Davis, M.S., M.D., Ph.D., Professor of Surgery and Chairman of the Division of Surgery, Northwestern University Medical School, Chicago. Second edition. Cloth. Price, $7. Pp. 503, with 303 illustrations. Philadelphia: Lea & Febiger, 1942.

A second edition of this elementary treatise on neurologic surgery indicates that it has been found useful. In this edition many errors which crept into the first edition have been corrected. The advice given is sound and conservative. It is a little difficult to see what purpose is served by the first chapter. A practitioner who depended on the sketchy information contained in it could not possibly make a satisfactory neurologic examination. The author would have done better to emphasize those examinations of special importance to neurosurgery at greater length. The chapter is so condensed that it necessarily abounds in dogmatic half statements. Plate I is unsatisfactory; hardly any student with only the picture *C* in mind would recognize a choked disk. Photographs are proper in support of a scientific thesis, but in an elementary treatise such as this a good analytic drawing would be much more useful. Moreover, the material in the chapter is badly organized; for example, uncinate fits are described under the olfactory nerve and not with the regional symptomatology of the cerebrum.

An excellent chapter on craniocerebral injuries follows. One notes only an occasional lack of specificity in the directions for treatment: for example, that one should give "a solution of cream, eggs and sugar which contains 1 calory for each cubic centimeter of fluid." One wonders how many practitioners could make up such a solution. Figures 14 and 15, attributed to Dr. Paul B. Magnuson, are copied from Cushing (*Brit. M. J.*, Feb. 23, 1918, figs. 4 and 14). The normal pressure of the human spinal fluid is usually given as 70-180 mm. of water. In discussion of the gliomas the author notes that "these tumors have been subdivided by various methods by many individuals and as a result there is still no completely uniform nomenclature by which the gliomas may be classified." He then proceeds to follow slavishly the classification of Bailey and Cushing; why not say so? The author does not mention in the discussion of angiomas that a preoperative diagnosis may be made by angiography or that it is possible by this method to recognize glioblastomas in a large percentage of cases. In general he seems inclined to overestimate the dangers of the method. Many of the roentgenograms are not very demonstrative to the uninitiated, figure 53, for example. It seems illogical to put Zenker's fluid into an abscess. The wall of a cerebral abscess collapses and shrinks of its own accord when it is evacuated, and the Zenker's fluid can only make more necrotic tissue, as will also coagulation of the wall with an electric cautery. The advice given concerning trigeminal neuralgia is excellent. The discussion of spinal cord injuries, injuries of peripheral nerves and of spinal cord tumors is clear and concise. The same cannot be said concerning the chapters on the autonomic nervous system. But here the author finds himself on controversial ground and has not resisted the temptation to enter into too much detail for an elementary treatise. However, he ends by leaving the reader in no doubt of his own attitude toward the problem. The reviewer is in entire sympathy with his discussion of surgical epilepsy. After completing the book, one has the impression that its defects are of minor importance and that the advice given is sound and conservative. It is a safe guide to place in the hands of the practitioner.

A Textbook of the Practice of Medicine. By Various Authors. Edited by Frederick W. Price, M.D., C.M., F.R.C.P., Consulting Physician to the Royal Northern Hospital, London. Sixth edition. Cloth. Price, $12.50. Pp. 2,032, with 99 illustrations. New York & London: Oxford University Press, 1941.

The last previous edition of this well known British textbook of medicine appeared only four years ago. Many sections have been entirely rewritten and there have been extensive revisions in others. This revision has encountered exceptional difficulties on account of the war. There are four new contributors; the list includes such authorities as Sir W. Langdon Brown, W. S. C. Copeman, N. Hamilton Fairley, Lord Horder, Donald Hunter, Sir Arthur Hurst and Sir W. H. Willcox (the last having died since this edition went to press). As is inevitable, there is considerable disparity in the information contained in different sections: the treatment of gonococcic infections is given only three sentences, although the treatment of coliform bacillus infections is discussed in detail (the two, incidentally, having been written by the same contributor); in the light of present information available, it would probably have been valuable to write in greater detail concerning the prophylactic value of tetanus toxoid. In some sections no references at all are cited; others give the names of individuals with the dates of their contributions in parentheses; there are exceedingly few full references—one of them (p. 440) being to an article published in 1910. Under treatment of the leukemias no mention is made of radioactive phosphorus, although antileukocytic serums are mentioned. Such minor criticisms could be multiplied but, in the main, the contributors and the editor have done an excellent job which should insure the continued popularity of this standard textbook.

Competitive Swimming and Diving. By David A. Armbruster Sr., M.A., Associate Professor of Physical Education and Head Swimming Coach, University of Iowa, Iowa City. Cloth. Price, $3.25. Pp. 301, with illustrations. St. Louis: C. V. Mosby Company, 1942.

Swimming is the "king of sports and the sport of queens." Its age, excellence as exercise, its worldwide appeal, its rating as big business, its romance and glamor warrant such a designation. Wherever the climate permits, it is a leading sport. Even football with costly stadiums, high salaried coaches and experts on publicity takes second place to the millions invested in seaside resorts, the pageantry of popular beaches and the interest in the selection of bathing beauties. Notwithstanding its popularity as a sport, the technic, kinesiologic principles, physiology and physical laws of swimming have received relatively little attention. The head coach of swimming at Iowa has recognized this fact and has successfully produced a book to meet this need. It should prove an excellent addition to the library of those interested in physical education and sports. The book is comprehensive, concise and well written. Its illustrations "were secured almost entirely from an underwater movie study of some of the world's greatest swimmers." They are, therefore, forceful and informative. The chapters on "conditioning" and "competitive springboard diving" are especially valuable. The volume should prove a useful guide for the experienced coach and the expert swimmer. The beginner should find it helpful in learning the various phases of the intricate technics essential in acquiring grace and speed in diving and swimming.

Proceedings of the American Diabetes Association, First Annual Meeting, Cleveland, Ohio, June 1, 1941. Volume I. Cloth. Pp. 148, with illustrations. Cincinnati, 1942.

Five years ago a group of men informally discussed the idea of forming a national diabetes association and later invited the cooperation of local diabetes organizations in several large cities. The Committee for the Establishment of an American Diabetes Association met in New York City in 1940 at the time of the annual meeting of the American Medical Association. A constitution and by-laws were adopted and on Aug. 28, 1940 the American Diabetes Association was incorporated as a nonprofit organization in the state of Ohio. The first annual meeting of the association was held a few days previous to the annual session of the American Medical Association in Cleveland in June 1941. This volume contains the proceedings of that meeting and the various papers and discussions presented, a list of members of the American Diabetes Association, the constitution and by-laws, and the report of the secretary and treasurer. The Banting Memorial Address given by Dr. Elliott P. Joslin, entitled "Diabetes Yesterday, Today and Tomorrow," contains some delightful intimate historical bits about Dr. Joslin's early interest and despair in treating children with diabetes before the introduction of insulin and the great things he has been able to do for these patients since insulin was discovered. There are also papers and discussions by other well known workers in this field.

A New Dictionary of Quotations on Historical Principles from Ancient and Modern Sources. Selected and edited by H. L. Mencken. Cloth Price, $7.50. Pp. 1,347. New York: Alfred A. Knopf, 1942.

There are many books of quotations, so that one might well wonder why Mr. Mencken should decide to bring out his own. Certainly it was not from a lack of knowledge of other works, because he himself refers to the famous Bartlett's, later revised by Christopher Morley, also the books by Hoyt and Stevenson. The Mencken book differs by being planned on a historical arrangement, adequate as to bibliography, by the omission of platitudes and by a free intermixture of unusual materials with the old and the hackneyed. He has chosen many Biblical quotations omitted by previous compilers, and he has selected somewhat from foreign writers and provided adequate translations. A long list of acknowledgments to various publishers indicates the extent of the writers from whom Mr. Mencken has selected. The natural humor of the writer is apparent in his citation of the definitions of chiropractic and osteopathy, which are certainly not to be found in any other book of quotations. Under Golf appears the statement "It is unjust to claim the privileges of age and retain the playthings of childhood," taken from Samuel Johnson. Under this there is a reference "See also Child Labor." When Child Labor is consulted, one finds that classic of Sarah N. Cleghorn, now widely quoted:

> The golf links lie so near the mill
> That almost every day
> The laboring children can look out
> And see the men at play.

For those of the medical profession there are considerable numbers of references under the usual headings of physicians, food, heart, health, medicine and similar topics, offering innumerable texts for useful exercises in writing. The book is excellently printed, easily readable and certainly a contribution well worth while.

Immunology. By Noble Pierce Sherwood, Ph.D., M.D., F.A.C.P., Professor of Bacteriology, University of Kansas, Lawrence. Second edition. Cloth. Price, $6.50. Pp. 639, with 34 illustrations. St. Louis: C. V. Mosby Company, 1941.

In this edition two new chapters have been added: one on the reticuloendothelial system and the other on serum reactions. Revisions have been made in other chapters and the references brought up to date. The book continues to be essentially a textbook for beginning students of immunology and serology. It is written simply and covers the subject very well. No attempt is made to go extensively into the many complicated problems of immunology. The author has tried rather to introduce as many as possible of the more interesting phases of the subject to beginners. One may question the advisability of so many references, but the large list offers a good selection for varied interests. The book is well printed on a good quality of paper, and the illustrations are well selected. The author is well known as a competent student of the subject about which he writes, and the book should continue to prove of great value.

The Diseases of the Basal Ganglia. Proceedings of the Association December 20 and 21, 1940, New York. Editorial Board: Tracy J. Putnam, M.D., Chairman, Angus M. Frantz, M.D., and S. Walter Ranson, M.D. Research Publications. Association for Research in Nervous and Mental Diseases. Volume XXI. Cloth. Price, $10. Pp. 719, with 268 illustrations. Baltimore: Williams & Wilkins Company, 1942.

Like its predecessors, this volume holds a vast fund of information valuable for the research man in the field of the nervous system. Yet the work serves to emphasize how far the association has moved away from its original purpose. No longer does one get the feeling of an active group of eager scientists discussing vigorously a particular problem bringing to it original and recent work with a spirit of scientific controversy. Instead the papers are formal and long (never completely read at the meeting) and the discussion is sterile and minimal. The chapters on anatomy are excellent; the vascular supply is well done but could be shortened by half. There is no reason for a hundred and fifty pages devoted to histopathology with detailed clinical histories in Leo Alexander's chapter. Much in this volume is summary of knowledge; a shorter, concisely written symposium on newly discovered facts is what is expected from the proceedings of the Association for Research in Nervous and Mental Diseases.

El signo de Arce. Por Aquiles S. Lentino. Tesis de doctorado, Universidad nacional de Buenos Aires, Facultad de ciencias médicas. Paper. Pp. 33, with 15 illustrations. Buenos Aires: Imprenta Amorrortu, 1941.

This is a doctorate thesis which emphasizes the importance of the localization of intrathoracic tumors and describes particularly Arce's sign. José Arce is the dean of the medical department of the University of Buenos Aires, formerly head of the Institute of Clinical Surgery. Arce's sign is the radiologic sign observed by comparing radiographic images before and after the establishment of pneumothorax. In the roentgenograms obtained after pneumothorax it is noted that pulmonary tumors undergo double displacement, both vertical and horizontal, in the direction of the pulmonary hilus. When on comparing the roentgenograms one sees that the tumor shadow has not undergone any displacement, it may be affirmed that the tumor is extrapulmonary and it may be said that there is no Arce's sign or that the finding is negative. The thesis constitutes an excellent, though brief, presentation of the subject of pulmonary tumors, with illustrative roentgenograms which for the most part are nicely reproduced. Several interesting case histories are appended.

A Study of the Effect of Lead Arsenate Exposure on Orchardists and Consumers of Sprayed Fruit. By Paul A. Neal, Surgeon, et al. From the Division of Industrial Hygiene, National Institute of Health. Prepared by direction of the Surgeon General. Federal Security Agency, Public Health Service. Public Health Bulletin No. 267. Paper. Price, 40 cents. Pp. 181, with 42 illustrations. Washington, D. C.: Supt. of Doc., Government Printing Office, 1941.

Several years ago the U. S. Public Health Service was assigned the problem of studying the effect of lead arsenate on orchardists and consumers of fruit that had been sprayed with this toxic insecticide. The present volume contains the first comprehensive report of the investigations of the Public Health Service. An epidemiologic study has led the authors to conclude that the unusual environmental exposure to lead to which orchardists in the state of Washington are exposed constitutes no important health hazard. The children in the Wenatchee district showed higher values for blood lead, urinary lead and urinary arsenic content but there was in the opinion of the investigators no indication at the time of the examination of adverse effects on the health of these children. There appear to be no data in this series of studies on which there could be based a satisfactory tolerance for the lead content of apples and other fruits which have been sprayed with lead arsenate.

Psychoanalytical Method and the Doctrine of Freud. By Roland Dalbiez, docteur-ès-lettres; agrégé de philosophie. With an introduction by E. B. Strauss, M.A., M.D., F.R.C.P., Physician for Psychological Medicine, St. Bartholomew's Hospital, London. Volume I: Exposition. Volume II: Discussion. Translated from the French by T. F. Lindsay. Cloth. Price, $9. Pp. 415; 331. New York, Toronto & London: Longmans, Green & Co., 1941.

These two volumes consist of closely printed pages of citations of literature, quotations of case histories and endless argumentation of a philosophical rather than a scientific nature. The work does nothing to clarify psychoanalysis, and no one will be persuaded to take any stand on the controversies raised except to agree with the reviewer that paper was wasted.

Modern Medicine: Its Progress and Opportunities. By Netta W. Wilson, Minnesota Department of Health, and S. A. Weisman, M.D., F.A.C.P., Clinical Associate Professor of Medicine, University of Minnesota, Minneapolis. Cloth. Price, $2. Pp. 218. New York: George W. Stewart, Publisher, Inc., 1942.

This volume, which presents for the lay reader a review of the historical development of certain aspects of medicine, offers little that has not been reproduced elsewhere in more interesting terminology.

Was der praktische Arzt über Vitamine wissen soll. Von Dr. med. Karl Recknagel, Chefarzt des Sanatoriums Schloss Horneck. Boards. Price, 3.68 marks. Pp. 135. Leipzig: Georg Thieme, 1941.

This is a brief presentation of some important facts about the vitamins. It gives also some pertinent data regarding commercial vitamin preparations available in Germany. The book is of little value to physicians in this country.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

WOUNDS AND DISINFECTANTS

To the Editor:—**I am particularly desirous of obtaining an authoritative opinion on the efficacy of various antiseptics for use in first aid work in schools and minor emergency cases. I should like to know the antiseptic or therapeutic value of various drugs, their phenol coefficients and margins of safety or therapeutic indexes. I am interested in comparisons, especially between mercurochrome, tincture of iodine and the organic mercurial compounds, such as mercresin, merthiolate and metaphen, and their margins of safety, possibilities of tissue damage, and their indication for prevention of infection when used immediately after injury. Please omit name.**

M.D., Missouri.

To the Editor:—**The first aid manual of one of the large Pacific Coast companies is being remodeled, and I need specific and exact information from sources who should best know about the treatment of certain conditions. Would you be so kind as to answer briefly the following questions for me? What is the best antiseptic first aid treatment for minor wounds and abrasions for which a physician's services are not ordinarily required? What is the best first aid antiseptic for severe cuts and lacerations before a physician's services can be obtained? Is tincture of iodine a superior or inferior antiseptic when used in the these conditions? Why? What do you consider to be the best antiseptic to be used under the conditions mentioned? Why? Would a thorough cleansing of the wound with soap and water by the man on the job be considered as sufficient or superior precaution against infection without the added use of an antiseptic? You may feel that these questions somewhat overlap; therefore you may rather feel that you want to answer them all in one group rather than under separate headings. In any case I would appreciate your opinion. Would you also give me references—either books, articles or men which or whom I may consult concerning the foregoing?**

L. McDonough Gould, M.D., Seattle.

ANSWER.—These queries can be condensed into two fundamentally important questions, neither of which can be answered simply or with any degree of finality.

First, In the treatment of minor injuries what disinfectants are best? Unfortunately, no method has yet been discovered which measures directly and quantitatively the bacteriologic effects of disinfectants in wounds. Much attention has been devoted to the phenol coefficient and similar in vitro tests of iodine, mercurials and other antiseptic agents. For a valuable summary of these studies reference may be made to McCulloch's *Disinfection and Sterilization* (Philadelphia, Lea & Febiger, 1936). Phenol coefficient tests give most of the mercurials high ratings because they measure bacteriostatic rather than bactericidal power, and even minute amounts of these compounds in cultures prevent the growth of test organisms. If, however, the phenol coefficient test and other standard in vitro tests are so modified by dilutions or by the employment of neutralizing agents as to eliminate the factor of bacteriostasis, very different results will be obtained. By such tests Geppert (*Berl. klin. Wchnschr.* **26**, 789, 819, 1889), Shippen (Bull. 198, U. S. Dept. Agri. 1930), Meleney and Chatfield (*Surg., Gynec. & Obst.* **52**:430, 1931), Brewer (THE JOURNAL, May 20, 1939, p. 2009 and personal communication) and others have demonstrated conclusively that the more commonly used organic mercurial compounds, including those mentioned in the query, are relatively feeble germicides. Mercurials as a class are unsurpassed in bacteriostatic power, and it might be supposed that they would for this reason have a beneficial effect in wounds. It must be remembered, however, that skin, sweat, blood and wound secretions contain sulfides and perhaps other reducing agents which have more or less neutralizing effects on all mercurials. The whole question is much confused at present. All that can be said with certainty is that mercurials are far less antibacterial when used on skin and in wounds than the standard in vitro tests might lead one to suppose, that the phenol coefficient values of mercurials are not a reliable index of their disinfectant value under conditions of clinical use and that it is not possible at this time to say definitely which of the mercurial compounds is best. Price's quantitative tests of skin disinfection (THE JOURNAL, Nov. 26, 1938, p. 1993) seems to show that tincture of iodine is superior to mercurochrome for this purpose; nevertheless, iodine should not be used in wounds except possibly as a preliminary to débridement.

Second, What first aid treatment should be given traumatic wounds? Fresh wounds should be visualized as containing relatively few bacteria. What germs are present are apt to be concentrated in spots, here and there. For the first four or eight hours an undisturbed wound may be expected to show little change in character; at the end of that time secretions appear, and if any bacteria are present they may be spread by the secretions to all parts of the wound, where they proceed to multiply rapidly and invade the adjacent tissues to a greater or lesser extent. Thus a relatively painless, dry lesion with localized bacterial implants is transformed into a painful, discharging, generally infected one. If a wound is seen during the first few hours, every effort should be made to avoid the second stage just described.

The important principles in the treatment of fresh wounds are to prevent entrance of additional bacteria from without, to remove foreign bodies and devitalized tissue, to prevent if possible the spread of infection from localized areas to the rest of the wound, and to do nothing that will lessen the normal antibacterial powers of body tissues. Many time honored methods of wound treatment violate these fundamental principles and do more harm than good. Washing a wound with water or some weak antiseptic solution in a first aid station, and attempts to wash the surrounding skin with soap, are almost sure to introduce many new bacteria, and the entire wound may thus become seeded with infectious organisms. Flushing a wound with alcohol, iodine or any of the mercurial solutions rarely accomplishes the purposes of disinfection and prevention of infection; instead, the infection already present is thereby spread into previously sterile parts of the wound, the local tissues are injured by the chemical, and the natural defenses of the body are reduced. The only dependable means of disinfecting a wound rapidly is by thorough débridement. The great majority of fresh lacerations will heal with primary closure and rest, provided no foreign or devitalized material is present, and provided the tissues have not been damaged by ill advised treatment with disinfectants. The tissues, if given a chance, are usually capable of taking care of any infection that may be present. Body defenses are best increased by rest, elevation of a dependent part, giving of tetanus antitoxin and the administration of a sulfonamide drug when that is indicated.

The following specific methods of treatment are to be recommended: Fresh, clean scratches, abrasions and excoriations, involving only the superficial layers of skin, may be painted with a mercurial. Aqueous solutions are less painful than alcoholic and probably are just as good. A crust quickly forms which seals the lesion off, preventing further contamination, and under the crust healing usually takes place without evidence of infection. If dirt or grease has been ground into the skin, it must first be removed, with a sterile instrument if possible, but by washing if necessary. So-called soap substitutes may be useful for this purpose, since they are efficient detergents and do not cause pain. A satisfactory method of dressing these wounds is to powder them with sterile sulfanilamide and then cover them with sterile dry gauze. Fresh lacerations of a minor nature which do not require treatment by a physician usually do well if they are merely covered with a sterile unmedicated gauze pad, over which a dressing is applied with gentle pressure. All puncture wounds should be treated in the same way at the first aid station. In case of severe lacerations or avulsed wounds, control of hemorrhage is the first consideration. This should be done by tourniquet if possible. If bleeding is not an important feature, or after it has been stopped, the wound should be simply covered with a sterile dressing pending the arrival of a physician. The use of iodine or mercurials in such wounds is to be discouraged or even forbidden. Recent experience with war wounds suggests, however, that sterile sulfanilamide powder in these wounds does relatively little damage to the tissues, although it inhibits the development and spread of infection. As a result, the second stage of wound infection is delayed, subsequent treatment by the surgeon, whether simple suture or débridement, is facilitated, and the chances of obtaining a primary closure of the wound are increased. Sterile sulfanilamide powder, conveniently prepared in sterile paper envelops for emergency use, is, or soon will be, available.

SEASONAL VARIATION IN DIABETES MELLITUS; CORRELATION OF BLOOD PHOSPHORUS AND BLOOD SUGAR

To the Editor:—Will you kindly send me any information you have about (1) the seasonal variation in diabetes mellitus and (2) the correlation of blood phosphorus and blood sugar? Please cite references.

John F. Kenney, M.D., Pawtucket, R. I.

ANSWER.—1. Dr. Herbert L. Lombar, director, Division of Adult Hygiene of the Massachusetts Department of Public Health, points out that in 1937 the deaths from diabetes during December and January to May inclusive numbered 16,926 and during June to November inclusive 13,661, thus showing a preponderance in the winter months. For comparison he computed deaths from cancer proportional to diabetes totals, and the figures are 15,294 and 15,293 respectively for the two periods, thus emphasizing the significance of the preponderance of diabetes deaths in the colder section of the year. Dr. Lombard's table follows:

Month	Diabetes Deaths, United States, 1937		Cancer Deaths, 1937, Proportioned to Diabetes Totals	
December	2,846		2,624	
January	3,330		2,638	
February	2,859		2,305	
March	2,833		2,625	
April	2,598		2,514	
May	2,460		2,588	
Totals		16,926		15,294
June	2,202		2,488	
July	2,261		2,610	
August	2,131		2,596	
September	2,217		2,464	
October	2,411		2,628	
November	2,439		2,507	
Totals		13,661		15,293

The relative distribution of diabetic deaths in South America, Australia and New Zealand would be of value in drawing conclusions about seasonal influenza.

As for onset, figures as a rule mean little, because the date of onset of diabetes is rarely determined with accuracy. Joslin statistics place onset as indefinite in 86 per cent of adults and 35 per cent of children, gradual (within two months to one week) in 9.4 per cent of adults and 44 per cent children, rapid (within the course of six days) in 2.7 per cent of adults and 3 per cent of children and sudden (in the course of one day) in 1.9 per cent of adults and 3 per cent of children. These figures are based on a study of 1,009 adults and 489 children. Obviously, data concerning adults are of little value, and even for children data in the indefinite and gradual groups would not carry much weight. However, with children when the types are rapid and sudden, the months of onset deserve attention. All the cases of children with diabetes in Joslin's clinic have been classified in the four groups of indefinite, gradual, rapid and sudden by months in the following table. The term unknown refers to cases in which the type of onset is not definitely recorded, but in which a guess was made at the month.

Month	Indefinite	Gradual	Rapid	Sudden	Unknown	Totals
January	93	81	16	15	5	210
February	34	58	13	18	7	130
March	44	50	16	12	6	128
April	32	40	11	15	8	106
May	24	48	10	10	8	100
June	61	50	18	8	10	147
July	48	60	18	10	8	144
August	35	52	9	15	11	122
September	54	68	15	20	14	171
October	27	51	15	15	5	113
November	42	55	14	23	11	145
December	43	70	14	21	12	160
Totals	587	683	169	182	105	1,676

The largest number of cases in the indefinite and gradual classes occur in January. This can be attributed to the psychologic tendency, when in doubt, of placing cases in January of the same year when seen rather than in the preceding year.

Combining the data as done by Dr. Lombard for December to May inclusive for comparison with June to November inclusive, the results are:

	Indefinite	Gradual	Rapid	Sudden	Totals
December to May	270	347	80	91	788
June to November	267	336	80	91	783

But here is shown no preponderance in the winter months. It would seem, therefore, that at present there is no evidence of a seasonal relation of the onset of diabetes, and such is what one would expect from the hereditary and constitutional character of the disease.

2. The correlation of blood phosphorus and blood sugar is not a simple one. For example, in normal animals the whole or serum phosphate falls when dextrose or epinephrine (which tend to raise the blood sugar) or insulin (which lowers the blood sugar) is administered. There is an increase in the hexose monophosphate content of skeletal muscle after insulin and epinephrine injections. The whole problem has recently been reviewed by Soskin, Levine and Hechter (*Am. J. Physiol.* **134**:40 [Aug.] 1941), whose article should be consulted for other references.

Soskin and his associates conclude that the fall in blood inorganic phosphate is due to insulin; it is not reflected in a change in the total phosphate content of the blood and they believe that it is probably due to an esterification of the inorganic phosphate outside the muscle. The rise in the hexose monophosphate content of muscle is due to epinephrine and results from the breakdown of muscle glycogen. "The usual observation of phosphate changes in both blood and muscle after the administration of either insulin or epinephrine to the intact normal animal is due to the reflex evocation of the secretion of one gland by the effects of the hormone of the other gland."

For other references and a general discussion of the subject, see also Jensen, H. F.: Insulin, Its Chemistry and Physiology, New York, Commonwealth Fund, 1938, pages 143-145.

TOTAL ALOPECIA

To the Editor:—A woman aged 40 had alopecia areata eight years ago which was treated with various local applications, irradiations and the administration of thyroid and anterior pituitary extracts with no appreciable success. In three years the alopecia became total and is now universal; there are also dryness of the skin and a decrease in sweating. She has a baby 15 months old; from the fifth month of pregnancy to the third month of lactation the hair on the mother's head grew considerably but disappeared at the end of that period; the baby was weaned in the second month. What is known of the endocrine aspects? Would corpus luteum therapy have prospects of success?

M.D., Arizona.

ANSWER.—It is well known that pregnancy stimulates the pilosebaceous apparatus and intensifies pigmentation of the skin. Thus it is relatively common to find patches of darkened skin on the face and especially in the folds at the axillas and groins during this period. At the same time some lanugo hairs may become dark and bristly, so that more hairs seem to be present. With the cessation of pregnancy the normal color of the skin and hair and other characteristics of the hair gradually return.

In this woman with total alopecia the added stimulus toward hair growth normally present during pregnancy was just sufficient to make new hair appear. When the interim stimulus of pregnancy stopped, the hair growing impetus was insufficient and the initial alopecia succeeded.

That the endocrine secretions determine in large measure the character of hair growth is acknowledged by all students. Accumulated clinical observations and experimental studies show that length, thickness and pattern of hair growth are influenced by increases in endocrine materials due either to administration or to hypertrophy of appropriate glands. Thus tumors of the adrenal glands may give rise to increased hair growth. Other known endocrine causes for increased hair growth are pituitary basophilism and arrhenoblastoma of the ovary.

Knowledge of the influence of the endocrine secretions on hair growth is so fragmentary that one hesitates to make positive and unqualified statements. Nevertheless, it can be ventured that the corpus luteum activity during pregnancy in the woman probably did not account for the hair growth. Increased hair growth following the administration of progesterone has not been recorded. Relatively huge quantities would have to be administered to approximate the amount present in pregnancy. Of course, corpus luteum secretion would not account for exces-

sive hair growth occurring in men. There is a better chance that increased adrenal gland activity accounts for the augmented hair growth in pregnancy.

There is no accepted successful endocrine therapy for alopecia areata. Bengtson claimed that he caused hair growth in alopecia totalis with pituitary products, but his results have not been corroborated. It would seem best to persist in the use of the best known nonendocrine methods even though they are not very effective at the age of 40 in alopecia totalis. Mild erythema doses of ultraviolet rays may be given over an extended period. The well tried use of irritants, such as phenol neutralized after an interval with alcohol, or applications of Cutler's solution are worth while if persisted in. The prognosis of the patient described is distinctly bad because of her age and the totality of the alopecia.

EFFECT OF ESTROGENS ON THE CLOSURE OF EPIPHYSES

To the Editor:—**A girl, aged 14, 5 feet 8 inches (172.7 cm.) tall and weighing 130 pounds (59 Kg.), has been menstruating regularly for two years. She is in good physical condition except for evidence of healed infantile rickets. Two years ago she was treated elsewhere for three months with large doses of estrogenic substance because with the onset of puberty she had become emotionally unstable. The instability had never been present before this time, and there is no sign remaining now. The girl is already taller than her mother. She has increased 2 inches (5 cm.) in height in the last twelve months. Her father is unusually tall. She and her parents visualize that, with the present rate of growth and the height at her present immature age, she will soon be pathologically tall. What is the status of endocrine therapy with regard to causing her to cease growing tall by hastening the closure of the epiphyses now? Do such methods have authoritative medical approval? Has enough of this kind of therapy been carried out for one to judge the results from what has happened to persons given such therapy? What adverse effects might such therapy reasonably be expected to have on the pituitary and gynecologic functions of the patient in the future?**

George W. Williamson, M.D., Dundee, Mich.

ANSWER.—The emotional instability which often marks adolescence is probably associated with changes in the endocrine balance involving increase of the production of estrogen. There is no well known evidence that treatment of young women with such instability with further doses of estrogen is of benefit and no evidence of what this may do for menstrual regularity and the rest of puberal development. It would be expected that such treatment would hasten the union of epiphyses, thereby limiting growth in height. This effect does not appear to have been important if present, since she is said to have grown 2 inches during the second year after the onset of menses. The first thing which should be done is to reassure the patient and her parents that, after menstruation has become regularly established, growth seldom continues long and that she almost certainly will not grow another 2 inches. For objective evidence of this matter, a roentgenogram of the femur may be obtained to decide whether the union of the proximal and distal epiphyses has been completed. If so, no significant gain in height will be expected. There is no therapy for hastening the union of epiphyses which its based on any extensive series of clinical cases, and the use of estrogens, androgens (in the male) or thyroid in either sex is based on theoretical considerations. It should therefore be employed only as experimental therapy under the observation of competent clinical observers. There is no reason why such therapy should have any lasting effect on the pituitary gland or its ability to control the activity of other endocrine organs.

REMOVAL OF ESCHAR IN DIABETIC WOMAN

To the Editor:—**A woman aged 65 with diabetes of long standing received a second degree burn on the sole of the foot from a hot water bottle. Tannic acid jelly and methylrosaniline solution were applied; this formed an eschar which is thick and difficult to remove. There is no active infection present. The diabetes is controlled by diet and insulin, but the condition of the foot is very painful and any attempt to remove the eschar is unsuccessful. Can you give some advice as to the proper method of removing this thick and painful crust?**

Jean Darche, M.D., Trois Rivieres, Que.

ANSWER.—A separation of the eschar in a burn of this type may be slow, indeed. It is sometimes accelerated by a moist dressing of boric acid for part of the time and by the use of an ointment such as plain petrolatum for the rest of the time. Attempts at surgical removal are usually painful and destined to failure. Should, however, infection develop beneath the crust, it is usually advisable to remove it surgically. After the crust is separated, soap and water cleanliness plus an ointment such as plain white petrolatum or scarlet red ointment will accelerate the healing.

EPIDURAL INJECTION OF PROCAINE HYDROCHLORIDE FOR ACUTE SACROILIAC DISEASE AND SCIATIC NEURITIS

To the Editor:—**Symptoms of acute sacroiliac disease and sciatic "neuritis" could often be alleviated by an injection of 60 to 75 cc. of 0.5 per cent procaine hydrochloride into the caudal canal. What would be the effect of such an injection on patients with low back pain secondary to displacement of the intervertebral disk in the third to fifth lumbar spines? If no relief of symptoms is obtained in these cases from such an injection, could this be used as a differential diagnostic test? I would appreciate your giving me references on the use of caudal injections of procaine for the relief of pains referred along the course of the sciatic nerve.**

M.D., Alabama.

ANSWER.—Pain associated with so-called acute sacroiliac disease and sciatic neuritis may be caused by muscle spasm. Such muscle spasm may be relieved by injections of procaine hydrochloride. Displacement of the intervertebral disk from the third to the fifth lumbar spine may be merely a bulging disk with the fibers of the annulus fibrosus or capsule of the disk still intact. Such bulging disks have been seen to relax or go back into the intervertebral space after a laminectomy has been performed. In these instances anesthesia relaxes the muscle spasm, and compression forces acting on the disk are diminished, permitting the space to widen and the contour of the disk to retract to normal. Injection of procaine might be expected to be of some value in a case of this type. If the disk is actually ruptured and the nuclear material of the central portion of the disk has been extruded into the extradural space, bringing pressure against a nerve root or impinging a spinal nerve root against a pedicle, the injection of procaine could be of little value. For purposes of differentiating between these two kinds of disk lesions, procaine injections may be of some value. The technic of an epidural injection of procaine or of warm physiologic solution of sodium chloride has been described by Comroe in his textbook on arthritis, page 793. References dealing with this or related subjects include:

Bankart, A. S. B.: Painful Backs, *Post-Grad. M. J.* **9**: 166 (May) 1933.

Feiling, Anthony: Hunterian Oration on Sciatica: Its Varieties and Treatment, *Brit. M. J.* **1**: 386 (March 10) 1928.

Gardner, W. P.: Sciatic Syndrome, *Minnesota Med.* **16**: 36 (Jan.) 1933.

Miller, L. F.: Value of Epidural Block in Sciatica, *M. J. & Rec.* **135**: 221 (March 2) 1932.

Comroe, Bernard I.: Arthritis and Allied Conditions, ed. 2, Philadelphia, Lea & Febiger, 1941.

SURGICAL RELIEF OF DYSMENORRHEA

To the Editor:—**A married woman aged 37 who has never been pregnant has had severe dysmenorrhea since the onset of the menses, with no relief until a year ago when I started using narcotics. The pain has always been intractable for one day; when the flow was established the pain would cease. For the past six months, however, the pain has been as severe (not constantly but spasmodically) for four or five days premenstrually as on the first day of flow; premenstrual tension has been severe also. I have tried practically every remedy. Allergy has been ruled out; there is no ascertainable pelvic pathologic condition, progesterone therapy has been ineffectual, as have been a dilation and curettage and premenstrual therapy with sedatives, catharsis and codeine. About the only medication mentioned in the literature that I have not tried is testosterone propionate, whose efficacy I feel has not been proved. I now intend to remove, surgically the menstruating portion of the uterus. (The patient is reconciled to not having a child and fears a neurosis from the dysmenorrhea.) Do you think this surgical treatment would completely eliminate the dysmenorrhea? Would there be premenstrual or menstrual symptoms at all, even though there would be no flow?**

M.D., New York.

ANSWER.—A far simpler and at the same time conservative operation which yields excellent results in cases of intractable dysmenorrhea is presacral sympathectomy. It consists in the removal of that portion of the sympathetic nervous system which lies in the lower lumbar and upper sacral regions. The technic is as follows:

The patient should be placed in the Trendelenburg position after a midline incision has been made from umbilicus downward toward the pubis for about 10 to 12 cm. After the peritoneal cavity is opened, the small intestine is packed off and the sigmoid and rectum are pushed to the left side and held there with a wide retractor. The uterus, adnexa and bladder may then readily be inspected and palpated. The region of the lower two lumbar vertebrae and the upper part of the sacrum is exposed to view. In thin women it is possible in some cases to see the presacral nerve immediately beneath the peritoneum. Whether or not the nerve is seen, the parietal peritoneum above and in the middle of the sacral promontory is elevated and incised with scissors. This incision is extended upward for about 4 or 5 cm. and for a similar distance down along the sacrum. When the peritoneal flaps are pulled aside a fibrocellular layer of connective tissue will be exposed covered by more or less adipose tissue. This tissue can easily be separated from the peritoneum and the lower end of the aorta without

danger. It is in this layer that the presacral nerve lies. With an aneurysm needle the tissue is elevated at the bifurcation of the aorta, and the dissection is carried to a still higher level. As this is done it will be found that in most instances the tissue spreads out triangularly. The middle sacral artery should be pushed away from the nerve, but if it is injured it can readily be ligated. After the dissection is carried as high as it is desirable to go, the layer of nerve tissue is separated from the underlying tissue down past the sacral promontory into the pelvic cavity. In this region the plexus has divided into the two hypogastric nerves; hence it is necessary to dissect one of these nerves at a time. At least 2 or 3 cm. of each hypogastric nerve should be resected in addition to 4 or more cm. of the superior hypogastric and the intermesenteric plexuses. The fibrous tissue layer which contains the hypogastric nerves is much more resistant than that which contains the presacral nerve. As the dissection is carried out, nerve filaments projecting outward will be encountered. These should be followed as far laterally as possible before one cuts them. In most instances ganglions will be included in the resection. The dissected tissue should preferably be removed in one piece. It is not necessary or advisable to ligate the presacral nerve or the hypogastric nerves before cutting them, because the only blood vessels in intimate contact with them are insignificant vasa nervorum. Rarely is bleeding encountered which requires more than simple temporary pressure to check it. (Where the mesosigmoid is short, care must be exercised to avoid injury to the inferior mesenteric vessels.) After the nerve is resected, the posterior parietal peritoneum is sutured with plain catgut and the abdominal wall is closed in the customary way.

This operation does not interfere with pregnancy or labor. In fact, not only does it nearly always completely relieve menstrual pain but it also greatly diminishes the pains of labor.

If the menstruating portion of the uterus is completely removed, naturally there would be no further cyclic bleeding. If the entire corpus uteri is not removed, the dysmenorrhea may persist. Regardless of this, the surgical operation indicated in this case is not hysterectomy but pelvic sympathectomy.

OXYQUINOLINE, ECZEMA AND CUTICURA

To the Editor:—**I treated a man with a subacute eczema of the lower third and lateral aspect of the left leg with moist compresses, Lassar's paste, Unna's paste and the like with no improvement. He had never had eczema before, he felt fine, and the physical examination was negative. Finally I told him that I could do no more and advised consultation. Instead, he procured Cuticura Ointment, which promptly healed the eczema. Cuticura Ointment contains beeswax, petrolatum, oxyquinoline, unbleached paraffin and unbleached liquid petrolatum. What action has oxyquinoline? Was the secret of this cure merely the application of an emollient ointment?**
M.D., Nebraska.

ANSWER.—Oxyquinoline sulfate (Chinosol) is a neutral salt of oxyquinoline (8-hydroxyquinoline), from which the latter is readily liberated in a nascent condition. In the report of the Council on Pharmacy and Chemistry (THE JOURNAL, May 28, 1910, p. 1801) it was shown that oxyquinoline is decidedly less efficient in its killing power on bacteria than is phenol; the 1 per cent solution is not certainly fatal to the bacillus of typhoid fever even after ninety minutes' exposure. On the other hand, its power of restraining development is far superior to that of phenol; one part in ten thousand is sufficient to prevent development of Staphylococcus pyogenes or the Eberthella typhosa. As an antiseptic in various conditions, as vaginitis, rhinitis and similar catarrhs, there is much evidence of its value. It has also been used successfully as an intestinal disinfectant, and Lorch (*Deutsche Aerzte Zeitung*, 1908, p. 406) has even obtained favorable results in the treatment of Asiatic cholera. As a local application to mucous membranes, it may be used in strengths of from 1:500 to 1:2,000.

The only active ingredient in the ingredients listed as being contained in Cuticura Ointment is oxyquinoline, which is now being incorporated in some proprietary ointments for its germicidal and fungicidal effect. In the event the subacute eczema of this patient had been irritated by previous stimulating local applications or was the site of secondary infection, "the secret of cure" in this case could well be the bland character of the proprietary ointment plus the fact that it contained an agent (oxyquinoline) which is effective in combating infection. In view of the complex nature of the etiologic factors of eczema, e. g. local irritants and neurogenic causes, these may have been obviated coincidentally with the application of the proprietary ointment in this case. The factor of coincidence is an important one to be considered in all cases of dermatitis in which prompt healing occasionally occurs after the application of an unknown complex proprietary. It is factors such as these that lead patients to write glowing testimonials to the manufacturer.

Chinosol, the brand of oxyquinoline sulfate manufactured by the Chinosol Company (Parmele Pharmacal Company, distributor), formerly accepted by the Council on Pharmacy and Chemistry, was omitted from New and Nonofficial Remedies 1931 because unwarranted claims were made in the advertising.

RECONSTRUCTION OF CONTINUITY OF BILE DUCTS

To the Editor:—**I have a case in which a part of the common bile duct has completely sloughed out. At the first operation a stone was found at the junction of the hepatic and gallbladder ducts, with an empyema of the gallbladder. The stone and the gallbladder were removed and a T tube was placed in the common duct where the stone was removed. There was drainage for about eight weeks; the wound closed up and the patient felt fine for a month, when jaundice developed and operation revealed another stone in the same location. The stone was removed and a T tube was reinserted. After the patient recovered from this, jaundice slowly developed again and at the third operation the duct had stenosed completely at its upper end by adhesions. A T tube was again sutured in, with the hope that it would granulate over, but the same process is being repeated now that the tube is being spontaneously pushed out. I have read somewhere about gelatin tubes being used for anastomosis of blood vessels. Where are such tubes available and would this be feasible in attempting to anastomose two ends of the common duct? Are silver, gold or glass tubes ever used for such purposes?**
H. J. Van Duine, M.D., Byron Center, Mich.

ANSWER.—In plastic operations for the reconstruction of continuity between the ends of the bile ducts or between the extrahepatic bile ducts above a site of stricture and an opening made in the duodenum, absorbable tubes of any kind have no advantages over nonabsorbable tubes. In fact, the latter are preferable, because the longer they can be kept in position the better the chance will be not only for good anastomosis to result but also for the inflammatory reaction around the site of anastomosis to subside without too much formation of scar tissue to contract the anastomosis. The best nonabsorbable tubes are those made of rubber, because they are flexible and pass out of the anastomosis and through the gastrointestinal tract without the possibility of occurrence of pressure necrosis, which might be the case if rigid tubes of metal or glass were used and became fixed at any point in the intestine.

If a rubber tube or catheter is used in anastomosing the two ends of the common bile duct, enough of it must extend beyond the sphincter of Oddi into the duodenum so that peristalsis will pull the tube out of the duct. If it does not pass the sphincter of Oddi the tube will remain in the duct, and, since it is a foreign body, bile pigment and cholesterol will be deposited in such a manner as to obstruct the lumen of the tube, and a large stony deposit will form around it, since it forms a nucleus for such deposition.

Studies of the results of the surgical treatment of stricture of the common bile duct indicate that the best chances for preventing recurrence of stricture occur in those cases in which there is a sufficient portion of normal duct above the stricture to enable the surgeon to anastomose it accurately to an opening made in the duodenum (hepaticoduodenostomy) and also in those cases in which the stricture is small in extent, can be excised and the ends of the duct can be approximated without tension. Results in such cases are satisfactory, provided there is not too much hepatic damage or infection.

References:

Walters, Waltman: Strictures and Injuries of Bile Ducts: A Study of Results of Operations in Eighty Cases, THE JOURNAL, July 15, 1939, p. 209.

Walters, Waltman, and Lewis, E. B.: Strictures of the Common and Hepatic Ducts, *Proc. Inter-State Postgrad. M. A. North America*, 1939, p. 319.

CHRONIC ASYMPTOMATIC SYPHILIS

To the Editor:—**A white unmarried man aged 20 was admitted to the hospital eight months ago because of tetanus. He was given tetanus antitoxin. A routine Wassermann and Kahn test was 2 plus. Three days after the serum was administered he suffered from severe serum sickness and arthritis. The Wassermann and Kahn tests taken about once a month have shown 1 plus or 2 plus reactions during the past eight months. There are no symptoms, signs or history of congenital or acquired syphilis. Can this be due to the tetanus antitoxin or should the patient be considered syphilitic and so treated, or should any other tests be performed?**
A. A. Fisher, M.D., Woodside, L. I., N. Y.

ANSWER.—While the possibility of biologic falsely positive Wassermann and Kahn reactions due to tetanus and serum disease cannot be denied, this is highly improbable in view of the fact that both tests have given repeatedly positive reactions. Under the conditions the possibility of chronic latent syphilis is to be seriously considered. A complete examination of the spinal fluid is strongly advisable because nonspecific reactions do not occur as frequently as with serum. If slight pleocytosis with some increase of protein, positive Wassermann and positive colloidal gold reactions were observed, the results would

virtually prove the presence of chronic asymptomatic syphilis. Otherwise, serum tests should be tried with three or four different laboratories employing complement fixation and flocculation tests. If all or the majority should give positive reactions there would be strong presumptive evidence of chronic latent syphilis. On the other hand, if the majority observed negative reactions, treatment for chronic syphilis could be omitted on the basis of supposedly nonspecific reactions. It is also advisable to employ the Kahn verification test, although its status in differentiating between falsely positive reactions and those due to latent syphilis cannot be defined at the present time.

TREATMENT OF A PATIENT IN THE ABSENCE OF SIGNS OF SYPHILIS BUT WITH POSITIVE SEROLOGIC TESTS

To the Editor:—A white woman aged 21 came for a premarital serologic test on Aug. 12, 1939. A Kahn test was positive. There had been a Kahn test in 1936 which was negative. She had a tuberculous peritonitis in 1933 but no other tuberculous lesion. There were no signs or symptoms of syphilis. The Kahn test was repeated on Aug. 16, 1939 and was again positive. A spinal puncture was performed on Oct. 20, 1939 and was entirely normal. On Aug. 19, 1939 1 cc. of bismuth in oil and 0.06 Gm. of mapharsen were given, and this was given for twelve doses; then bismuth in oil only for eight doses and then both for ten doses, until a total of seventy-one doses of each were given, at one week intervals until July 1940, when there was a rest period, and then completion of treatment with 0.1 Gm. of bismarsen in ten doses. She was given moderate oral doses of potassium iodide with the bismuth compound part of the time. The Kahn reactions were positive on the blood, Aug. 14 and Aug. 16, 1939; negative on the spinal fluid, Oct. 22, 1939; positive on the blood, Jan. 22, 1940; negative on the blood, June 29, 1940; positive, June 14, 1941, and positive, Sept. 13, Oct. 18 and Dec. 27, 1941. There are no signs or symptoms of syphilis and no history of any exposure or lesion. I felt that she had had adequate treatment. Should she have more treatment and, if so, what?

M.D., Michigan.

ANSWER.—If this young woman does have syphilis, she has had almost a sufficient amount of treatment. However, the evidence is by no means conclusive that she had syphilis, as the serologic reports in the inquiry suggest the possibility that they are of a biologically false positive type. It would seem advisable even now to take several samples of blood and to send them to different laboratories to be examined the same day in an effort to determine whether the reports coincide. If the serologic reports from the same sample of blood are conflicting, that is, some positive in varying strengths and some negative, it would then be advisable to continue with observation only. If, however, it should happen that the reports are all 4 plus, two courses of a bismuth compound, twelve injections each, given twice a year for approximately three years would be ample. If she should marry in the meantime and become pregnant, a complete course of treatment throughout the pregnancy would be necessary.

TETANUS PROPHYLAXIS

To the Editor:—In a discussion among the physicians here there is disagreement as to whether tetanus antitoxin should be given in every case of skin laceration and brush burn or whether it should be given only in selective cases. I shall appreciate your letting me know whether members of the clinic would have any additional responsibility in this regard and also what is the general rule and safe legal procedure in administering the antitoxin, with a general view of giving antitoxin in practically all lacerations, abrasions and puncture wounds.

M.D., Texas.

ANSWER.—Tetanus bacilli and spores are so widely distributed in nature that almost any wound may serve as port of their entry into the body. It is indeed true that in civil life wounds are only rarely followed by tetanus, but unfortunately it is not possible to tell beforehand whether tetanus will develop from a particular wound. Tetanus is a deadly disease. While tetanus antitoxin will prevent tetanus, it has little curative effect once tetanus is established. In view of the facts the physician on whom falls the duty to treat first a person who has been exposed to possible tetanus infection and intoxication through a wound cannot be exempt from blame if tetanus develops in case he did not inject antitoxin serum promptly. For prophylactic purposes an injection of 1,500 units is generally regarded as an adequate dose.

It is generally agreed that the average puncture and skin abrasion that does not occur in an area of farm soil or barnyard dirt should not receive tetanus antitoxin. One industrial surgeon has had thousands of cases in which no tetanus antitoxin has been administered and not a single case of tetanus developed. On the other hand, seriously injured persons with large compound fractures from any location, should be immunized with both tetanus and gas antitoxin, care being taken to give about double, or more, of the prophylactic dose.

LAUGHING AND PETIT MAL

To the Editor:—In Queries and Minor Notes in The Journal, Jan. 3, 1942, page 94, the case presented in "Laughing and Petit Mal" is one of classic narcolepsy with cataplexy. This condition is described in Best and Taylor, The Physiological Basis of Medical Practice, Baltimore, William Wood & Co., 1937, page 1394. The only abnormal observation in the case presented is the unconsciousness, which never occurs in cataplexy. However, the extremely short period of unconsciousness mentioned may not be true unconsciousness.

Lawrence M. Serra, M.D., Baltimore.

To the Editor:—It appears most likely that the answer to the question in "Laughing and Petit Mal" has missed the correct diagnosis in the case presented. From the information given it appears most likely that the patient does not have the "petit mal" form of idiopathic epilepsy at all but rather is a victim of narcolepsy with cataplexy. Contrary to the answer, administration of amphetamine or ephedrine is the proper treatment for the drowsiness (narcolepsy), but no treatment other than the voluntary control of laughter will be effective against the cataplectic seizures.

Paul C. Bucy, M.D., Chicago.
Associate Professor of Neurology and Neurological Surgery, University of Illinois College of Medicine.

COMMENT.—In answering the query it was assumed that the facts as given by the questioner were correct and that the patient did lose consciousness momentarily. If this is so, only a diagnosis of petit mal can be considered, for loss of consciousness would not occur in the other conditions under consideration. True, an attack of narcolepsy might confuse the observer; electroencephalographic tracings would aid in the differential diagnosis. Giving amphetamine or ephedrine is the proper treatment for narcolepsy. However, such a diagnosis cannot be made in view of the definite statement by the questioner that the patient did lose consciousness.—ED.

ALOPECIA FURFURACEA

To the Editor:—A woman aged 35 with a diagnosis of alopecia furfuracea has good general health and no pulmonary, circulatory or renal disease. The Wassermann reaction is negative. For several months she has had a condition of the scalp accompanied by a good deal of dandruff, as indicated by the diagnosis. The local condition cleared up fairly satisfactorily with the use of a saturated solution of molecular sulfur and also with hypodermic medication with an arsenic preparation, sodium cacodylate, and with internal administration of vitamins. After the improvement of the condition of the scalp she has noticed that her hair continues to fall out profusely. I should like to know if there has been any definite progress made in the science of organotherapy or if there are specific vitamin substances administered hypodermically or orally that would possibly have a tendency to check this malady.

M.D., Massachusetts.

ANSWER.—Alopecia furfuracea usually involves the temporal and frontal regions first and is associated with branny desquamation of the corneous layer. It is a seborrheic disorder that usually attacks young adults and may persist for several years before the loss of hair is great enough to attract the patient's notice. The thinning process is gradual. Local therapy with stimulating hair lotions and the use of sulfur and salicylic acid are indicated, together with careful hygiene of the scalp. Low systemic tone or anemia must also be treated as indicated. In a recent article (Waisman, Morris, and Kepler, E. J.: Alopecia Areata: An Appraisal of Endocrine Factors in Its Causation, THE JOURNAL, May 3, 1941, p. 2004) the following statement was made: "It is our opinion that endocrine treatment, at least in the present state of its development, is ineffectual." The use of vitamins in alopecia is still in its experimental stage, and its present status is inconclusive.

INTRADERMAL INJECTIONS OF TYPHOID AND DIPHTHERIA VACCINES

To the Editor:—Please inform me whether the intradermal injection of typhoid and diphtheria vaccines is as effective as the subcutaneous injection for immunization. What doses do you advise for intradermal immunization.

E. Fernandez Soto, M.D., Havana, Cuba.

ANSWER.—The indications are that the intradermal injection of typhoid vaccine and of alum precipitated diphtheria toxoid is just as effective as the subcutaneous. Great care must be used to deposit the vaccine or toxoid intradermally in order to obtain the maximum immunologic response. For intradermal injection of standard typhoid vaccine the dose is one-tenth the dose for subcutaneous injection. This means that 0.1, 0.15 and 0.2 cc. are injected, with an interval of seven days or so between the injections. The same dose is used for children. The U. S. Army gives one injection of 0.1 cc. of typhoid vaccine intradermally in routine reimmunizations (two years or more after the first immunization). The intradermal dose of alum precipitated diphtheria toxoid is 0.1 cc. A second injection of the same quantity in about three weeks may be advisable.

PATCH TEST FOR ANTIMONY

To the Editor:—I have not had any experience with patch tests for dermatitis. I would appreciate your advice concerning the use of patch tests for workmen for the Texas Mining and Smelting Company. This company makes antimony—the only smelter in North America and probably the only one outside of China. I have had several cases of dermatitis resulting from handling antimony. How would you prepare the test?

J. A. Simpson, M.D., Laredo, Texas.

ANSWER.—The handling of antimony and its compounds is an occasional cause for contact dermatitis. All workmen who are exposed and all new applicants who will be exposed should be tested by the patch or contact method. A piece of cotton or gauze about ½ to 1 inch square is dipped in an aqueous solution of 2 per cent antimony chloride and is applied to a clear spot on the arm or back. The dressing is protected by a piece of cellophane and held by two strips of adhesive tape. The patch is removed at the end of forty-eight hours (sooner if well defined dermatitis results). A positive test is indicated by a redness or vesiculation or both at the site of the contact of the skin and the antimony chloride. As a control test, similar procedures should be carried out on the arms of the doctor and nurse, who are presumably not especially exposed to the metal. If the control tests are positive the solution is too strong, but Sulzberger (Dermatologic Allergy, Springfield, Ill., C. C. Thomas, 1940, p. 442), states that 2 per cent antimony chloride solution is the correct strength and that it is **not** a primary irritant; in other words, it will not cause dermatitis to all but only to those who happen to be allergic to it.

SODIUM CACODYLATE FOR VINCENT'S ANGINA

To the Editor:—In The Journal, March 14, 1942, page 936, there is an article on the use of sodium cacodylate. I should like to know if sodium cacodylate is indicated in the treatment of Vincent's angina either for treatment or for prevention. I have been using sodium cacodylate for many years before a tonsil operation and after. Several of my doctor friends also use this. We have found that it has cut down postoperative soreness and hemorrhages to a high degree. I should like to know the indications for use and results in Vincent's infection. I like this product for use in this manner and I am afraid that the manufacturers will discontine making this in ampule form after seeing the article referred to.

D. H. Anthony, M.D., Memphis, Tenn.

ANSWER.—Sodium cacodylate along with other arsenicals is still rather widely employed in the treatment of Vincent's angina, although in recent years its value has been discounted in favor of active local therapy. It is not likely that the manufacture of this preparation will be discontinued as long as there continues to be a demand for this form of arsenic for injection. The Council on Pharmacy and Chemistry has voted to omit this type of product from N. N. R. because of the lack of evidence to justify its continued use.

FENESTRATION OPERATION FOR OTOSCLEROSIS

To the Editor:—I have a patient, aged 30, with otosclerosis. During the past two years his hearing has become worse. He has heard about the operation for otosclerosis which Lempert has popularized recently. Could you give me further information as to its value?

M.D., New York.

ANSWER.—The fenestration operation for otosclerosis is being done by a number of otologists in this country with encouraging results. The published reports are summarized in the February 1942 issue of the *Archives of Otolaryngology*. Before considering the operation, the patient must have a good nerve of hearing as determined by the bone conduction tests. He must understand that the operation is still new. Late results ten or twenty years after are not yet known. It is not always successful, and there is the possibility that the hearing in the ear that is operated on may be made worse. In competent hands there is a better than 50 per cent chance of a lasting substantial hearing improvement in suitable cases, judging by the published reports.

NODULES OF RHEUMATOID ARTHRITIS

To the Editor:—Please discuss the pathogenesis, histology and clinical significance of the fibrous skin nodules which are found associated with chronic arthritis. How would you differentiate them clinically and histologically from the juxta-articular nodules of late syphilis?

M.D., New York.

ANSWER.—The subcutaneous nodules of rheumatoid arthritis are found in about 20 per cent of the cases and constitute a pathognomonic lesion of this disease discernible on physical examination. They are most commonly found over the olecranon or distal to it. Other sites are the tendons of the fingers, knees, feet, wrists and ankles, the base of the skull and the area over the spinous processes. They are occasionally found on the thoracic wall or over the scapulas. One cannot differentiate them clinically from the juxta-articular nodules of syphilis. However, they can be distinguished from one another on microscopic examination. The nodules of rheumatoid arthritis have three reasonably well defined merging zonal areas: (*a*) the central zone, or zone of necrosis; (*b*) the intermediate zone, comprising proliferating cellular tissue, the cells of which may or may not be regularly oriented (palisading), and (*c*) the peripheral zone, consisting of the inflamed tissues in which the nodule develops. Exudation is rarely a prominent feature of these lesions. Aschoff-like nodules are rarely if ever seen. The pathogenesis and cause of these lesions remain unknown.

ROENTGENOGRAPHIC DETECTION OF A SWALLOWED ERASER

To the Editor:—A boy aged 8 years accidentally swallowed an eraser on Sept. 25, 1941. He was placed on a soft diet. The parents were instructed to watch the stools. On the following day a flat roentgenogram demonstrated a definite shadow 1.5 by 4.5 cm. on the right side in the region of the ileocecal valve. He still had no complaints, the temperature, respiration and pulse being within normal limits. The third roentgenogrgam was taken on the following day and at this time no trace of a shadow could be found. On the following day two more roentgenograms were taken, one high enough to include the diaphragm and the lower parts of the lungs. The second was low enough to include the upper third of the femurs. No shadow was found corresponding to the first picture. Why did we get a shadow the first day, while the remaining three plates failed to find it? The stools have all been examined carefully even up to date.

M.D., Missouri.

ANSWER.—This query cannot be answered satisfactorily because common school erasers vary considerably in the amount of mineral content. They seldom contain enough metallic salts to give high x-ray contrasts when lying in the stomach or bowel. Pure rubber defies detection, whereas red rubber tubing is easily visible because of the mineral oxides used in manufacture. In dealing with a common eraser swallowed by a child it might be visualized in a film of critical quality, whereas in one less critical it could be entirely missed. It could be further obscured by overlap of osseous structures.

SMALL BREASTS

To the Editor:—A woman aged 20 complains of lack of bust development. She weighs 107 pounds (48.5 Kg.), is 5 feet 2 inches (157.5 cm.) tall and menstruates regularly. One sister older and one younger have the same degree of development. Her breasts are rather small.

M.D., Colorado.

ANSWER.—It is inadvisable to attempt to stimulate the development of the breasts in this case. The only conditions under which breast growth may be stimulated are those in which the ovaries are not functioning, as in sexual infantilism or in amenorrhea due to underfunctioning of the ovaries. In these states the application of estrogens, either locally in the form of ointment or by other routes, will cause an increase in the size of the breast while treatment is continued. Regression occurs following cessation of treatment. In women who are menstruating regularly estrogen therapy is of doubtful value in bust development and may easily derange the regularity of the menstrual cycles. In such women apparently the breast tissue is scanty.

DUSTING POWDER FOR TRICHOPHYTOSIS

To the Editor:—A paper by D. T. Prehn in The Journal, Aug. 20, 1938 included a formula (salicylic acid 5 Gm., menthol 2 Gm., camphor 8 Gm., boric acid 50 Gm. and starch 35 Gm.) for a powder for use in mycotic infections of the skin. I have used this powder in some cases but find it difficult to use because it is hygroscopic. In the climate of Havana the powder becomes so moist that it forms a paste. I wish to inquire whether some modification of this powder might render it more satisfactory for general use or if some other more satisfactory formula for a good powder for use in the treatment of trichophytosis is known.

M.D., District of Columbia.

ANSWER.—In the preparation of the formula of Prehn, it is essential that the menthol and camphor are mixed separately so that no liquefaction takes place, and that the starch is very dry and moisture free. A satisfactory formula for a good powder for use in the treatment of trichophytosis is sodium thiosulfate 6 Gm. and boric acid 24 Gm.

ULTRAVIOLET BURNS OF THE EYE

To the Editor:—In Queries and Minor Notes (The Journal, April 4, p. 1264) I note with interest the query of Dr. Jonas S. Friedenwald concerning ultraviolet burns of the eye. For the past several months I have been using a treatment in cases of this type with a great deal of success. This treatment is not original with me, but I am not able to recall the source from which it was obtained. The treatment is as follows: One or two drops of 1 per cent pontocaine is instilled in each eye, after which the patient sits before an infra-red lamp at a distance of approximately 18 inches and gazes steadily at the lamp for a period of twenty minutes. This is sufficient for practically all such "flash" cases, and in those in which relief is not obtained the process is repeated in two hours. I have successfully employed this treatment in several hundred cases of shipyard workers and have not seen a case in which it did not work.

Lionel A. Jacoby, M.D., Oakland, Calif.